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ABSTRACT

This report is a first look at the results of the 1994 NAEP geography assessment. It presents national findings of 4th-, 8th-, and 12th-grade students' overall performance on the NAEP geography scale, and summary data for the major demographic subpopulations in the United States. Results are reported on a 500-point NAEP scale, used to show comparisons and trends over time, and according to the achievement levels, which are in a developmental stage, established by the National Assessment Governing Board. Sample questions for each grade level are provided. The preliminary results show: (1) the pattern of average scores by grade was typical of other subjects assessed by NAEP; (2) among the different regions of the United States, student performance varied by each grade level with high school seniors in the Southeast scoring a lower average than those in the other regions; (3) 22 percent of 4th graders, 28 percent of 8th graders, and 27 percent of 12th graders reached the proficient level which demonstrates competency in challenging subject matter; (4) across the three grades, about 70 percent of students attained at least the basic level which demonstrates partial mastery of challenging subject matter; (5) across the three grades, 2 to 4 percent reached the advanced level showing superior performance; (6) performance in geography at all grade levels was higher for students whose parents had more education; (7) at grades 4, 8, and 12, males tended to score higher than females; (8) at all three grades, White and Asian students had significantly higher scores than did Black and Hispanic students; and (9) 4th-, 8th-, and 12th-grade students attending non-public schools displayed higher performance in geography than their counterparts attending public schools. Twelve tables and six figures accompany the text. (EH)

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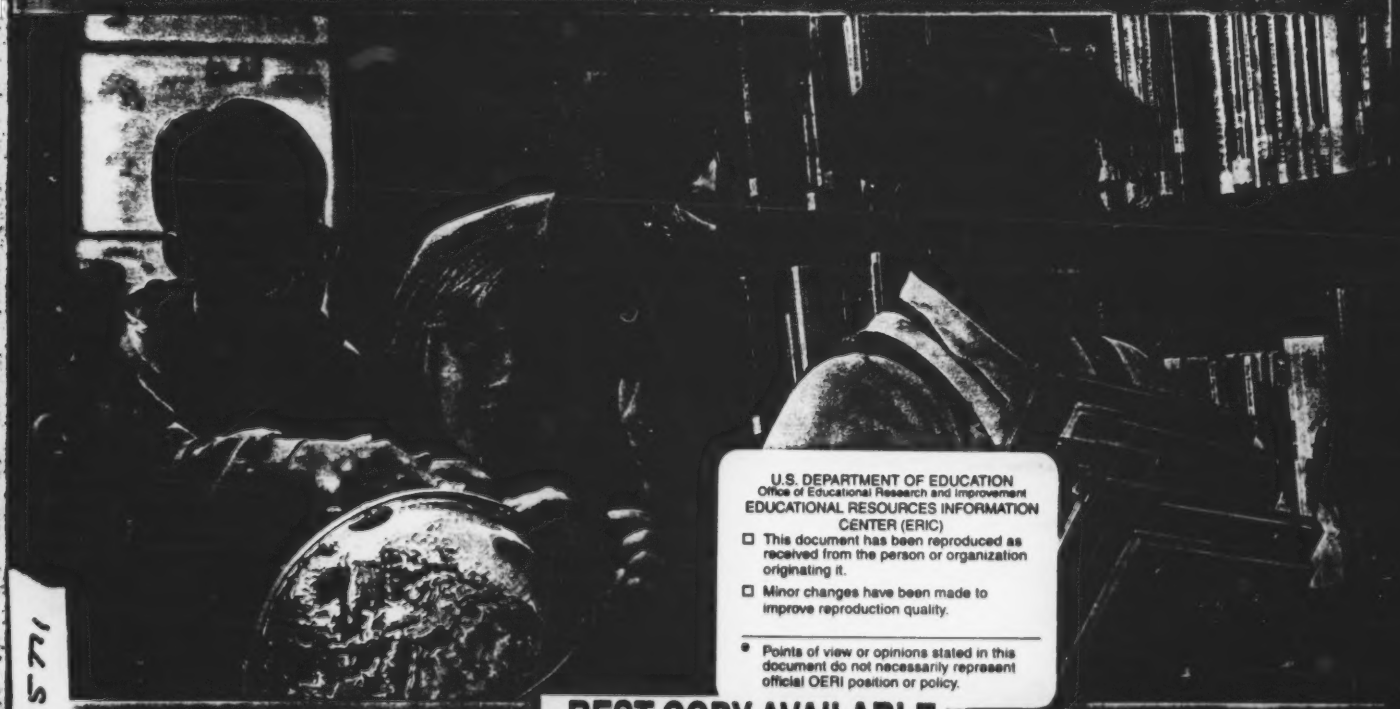
# NAEP 1994 Geography: A First Look

## FINDINGS FROM THE NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS



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THE NATION'S REPORT CARD, the National Assessment of Educational Progress (NAEP), is the only nationally representative and continuing assessment of what America's students know and can do in various subject areas. Since 1969, assessments have been conducted periodically in reading, mathematics, science, writing, history/geography, and other fields. By making objective information on student performance available to policymakers at the national, state, and local levels, NAEP is an integral part of our nation's evaluation of the condition and progress of education. Only information related to academic achievement is collected under this program. NAEP guarantees the privacy of individual students and their families.

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In 1988, Congress established the National Assessment Governing Board (NAGB) to formulate policy guidelines for NAEP. The Board is responsible for selecting the subject areas to be assessed from among those included in the National Education Goals; for setting appropriate student performance levels; for developing assessment objectives and test specifications through a national consensus approach; for designing the assessment methodology; for developing guidelines for reporting and disseminating NAEP results; for developing standards and procedures for interstate, regional, and national comparisons; for determining the appropriateness of test items and ensuring they are free from bias; and for taking actions to improve the form and use of the National Assessment.


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Washington, DC

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NATIONAL CENTER FOR EDUCATION STATISTICS

# NAEP 1994 Geography: A First Look

## *Findings from the National Assessment of Educational Progress*

Paul L. Williams
Clyde M. Reese
Stephen Lazer
Sharif Shakrani

**October 1995**

**Office of Educational Research and Improvement**
**U.S. Department of Education**

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# HIGHLIGHTS

The 1994 National Assessment of Educational Progress (NAEP) in geography continues a 25-year mandate to assess and report the educational progress of America's students. National results are provided that describe students' geography achievement at grades 4, 8, and 12 and within various subgroups of the general student population.

This report is a *first look* at the results of the NAEP 1994 geography assessment. It presents national findings of students' overall performance on the NAEP geography scale, and summary data for the major demographic subpopulations in the nation. Results are reported on a 500-point NAEP scale, used to show comparisons and trends over time, and according to the achievement levels, which are in a developmental stage, established by the National Assessment Governing Board (NAGB).

## What's New About This Assessment?

- The 1994 geography assessment is the first full-scale assessment of geography conducted by NAEP. The test framework, adopted by NAGB after a national consensus process, provides for an assessment of knowledge, understanding, and applications in the major content areas of geography education.
- This assessment requires students not only to demonstrate factual knowledge but also to think critically about geographic issues, such as the physical and human processes that shape patterns of settlement and trade. About 60 percent of assessment time was devoted to questions requiring short or extended written answers, and the remainder to multiple-choice questions (see Appendix B). Some questions require a student to draw inferences from the information provided. A wide variety of maps and graphs are used to measure the ability of students to interpret and analyze geographic materials.

## How Did We Do as a Nation?

- The pattern of average scores by grade — fourth grade, 206; eighth grade, 260; and twelfth grade, 285 — is typical of other subjects assessed by NAEP.
- As is typically the case in subjects assessed by NAEP, student performance varied by region. Among high school seniors, for example, students in the Southeast had lower average scores than did those in the other regions.*

The results are reported according to the achievement levels established by the National Assessment Governing Board. For each grade there are three performance standards: *Basic* - partial mastery; *Proficient* - solid academic performance that demonstrates competency in challenging subject matter; and *Advanced* - superior performance.

- 22 percent of fourth graders, 28 percent of eighth graders, and 27 percent of twelfth graders reached the *Proficient* level.
- Across the three grades, about 70 percent of students attained at least the *Basic* level.
- Two to four percent reached the *Advanced* level.

## How Did the Various Subgroups of Students Differ?

Although subsequent reports will provide a context for understanding subgroup differences, several differences are noted in this report:

Based on average scores:

- Consistent with findings in other subject areas assessed by NAEP, performance in geography at all grades was higher for students whose parents had more education.
- At all three grades, White and Asian students had significantly higher scores than did Black and Hispanic students.
- Fourth-, eighth-, and twelfth-grade students attending nonpublic schools displayed higher performance in geography than their counterparts attending public schools.
- At grades 4, 8, and 12, males tended to have higher scores than females.

The differences in percentages of students reaching the Proficient level among various subgroups of students (by race/ethnicity, parents' education, type of school, and gender) were generally similar to those observed with the average scores.

# CHAPTER 1

## Introduction

With the completion of its 1994 assessment program, the National Assessment of Educational Progress (NAEP) concluded its 25th year as the only nationally representative and continuous assessment of what America's students know and can do in various subject areas. In 1994, the NAEP program included geography assessments that were administered to representative samples of public and nonpublic school students at grades 4, 8, and 12. This report is a *first look* into the results of this assessment, providing summary data only for the major demographic subpopulations in the nation. The forthcoming *NAEP 1994 Geography Report Card* will give more detailed information about the results presented here. Perhaps more importantly, it will provide a context for understanding the findings as they relate to *instructional content; instructional practices; school and teacher characteristics; school conditions; and student background, student activities, and home environment.*

## The National Assessment of Educational Progress (NAEP)

NAEP is a congressionally mandated survey administered by the National Center for Education Statistics (NCES), U.S. Department of Education. Since 1969, NAEP has reported on the educational achievement of American students and provided accurate and useful information to parents, educators, and policymakers at the national, state, and local levels. NAEP has become an integral part of our nation's evaluation of the condition and progress of education.

Since its beginning, NAEP assessments have been conducted periodically in reading, mathematics, science, writing, history, geography, and other fields. The NAEP 1994 program included assessments in reading, United States history, and geography. (Separate samples were assessed for each subject.)

## The NAEP Geography National Sample

The NAEP 1994 geography assessment was based on a national probability sample of public and nonpublic school students enrolled in grades 4, 8, and 12. Approximately 5,500 fourth-grade students, 6,900 eighth-grade students, and 6,200 twelfth-grade students participated in the assessment. Detailed information about the student sample sizes is presented in Table A.1 in Appendix A. The national sample included students attending domestic Department of Defense (DoD) schools and Bureau of Indian Affairs schools.

## The NAEP Geography Framework

The NAEP 1994 geography assessment was based on a new blueprint, the *Geography Framework for the 1994 National Assessment of Educational Progress.*[1] It was developed through a national consensus process involving geographers and educators from around the country.

The assessment, which covered both global and United States topics, focused on three content areas in geography that established a context for investigating students' knowledge of key aspects of geography.

## 1994 Assessment Framework

**Three Content Areas**

**SPACE AND PLACE**
Knowledge of geography related to particular places on Earth, to spatial patterns on Earth's surface, and to physical and human processes that shape such patterns.

**ENVIRONMENT AND SOCIETY**
Knowledge of geography related to the interactions between environment and society.

**SPATIAL DYNAMICS AND CONNECTIONS**
Knowledge of geography as it relates to spatial connections among people, places and regions.

Table 1 shows the percentage of assessment time to be devoted to each content area specified in the framework. The percentages were constant across the three grades. In addition to guiding assessment construction, these percentages were used to weight the content subscales in the calculation of the composite geography scale used in this report. (A discussion of the content area subscale results will be included in the forthcoming *NAEP 1994 Geography Report Card.*)

**TABLE 1**

**Distribution of Assessment Time Across Geography Content Areas, by Grade**

| Content Area | Grades 4, 8, and 12 |
|---|---|
| Space and Place | 40% |
| Environment and Society | 30% |
| Spatial Dynamics and Connections | 30% |

In addition to defining the content of the assessment, the *NAEP 1994 Geography Framework* described the specific cognitive dimensions to be measured. Each assessment task was designed to measure either "knowledge," "understanding," or "applying." Again, the percentages of assessment time devoted to these three cognitive dimensions were established by the framework. The elements of the geography assessment are illustrated in Figure 1.

The framework also incorporated the use of a wide variety of stimulus material such as maps and diagrams. These were used to measure students' ability to interpret and analyze geographic materials.

Finally, the framework indicated that at least 50 percent of testing time should be spent on constructed-response questions that require students to write short (one or two sentences) or extended (a paragraph or more) answers. In the actual assessment, approximately 60 percent of assessment time was devoted to questions of this type.

At each grade level assessed, the NAEP 1994 geography assessment consisted of a set of test booklets, each containing student background questions and cognitive tasks. The background sections asked students to provide information about their characteristics, classroom instruction, and motivation to complete the assessment. The cognitive sections included stimulus materials and associated tasks designed to assess students' geographic knowledge and skills. A complete cognitive section for each of the three grade levels is reproduced in Appendix B. Each section contains a mixture of multiple-choice and constructed-response questions. At each grade level, the assessment was composed of six 25-minute blocks of cognitive questions. At grades 8 and 12, these were supplemented by one 50-minute block. Each assessed student completed a booklet with either two 25-minute

**Figure 1. NAEP Geography Assessment Framework Elements**

| Cognitive Dimension | Content Dimension: Space and Place | Content Dimension: Environment and Society | Content Dimension: Spatial Dynamics and Connections |
|---|---|---|---|
| Knowing | Where is the world's largest tropical rain forest? | What mineral resources are often extracted by strip mining? | What factors stimulate human migrations? |
| Understanding | Why are tropical rain forests located near the equator? | Explain the effects of strip mining and shaft mining on the landscape. | Explain the motivations of modern-day Mexicans and Cubans for immigrating to the United States. |
| Applying* | Support the conclusion that tropical rain forests promote wide species variation. | How can both economic and environmental interests be reconciled in an area of strip mining? | Compare current settlement and employment patterns of Cuban and Mexican immigrants in the United States. |

Note: Example questions are illustrative only, and are not meant to represent the full array of assessment content.
* Applying = A range of higher-order thinking skills.

blocks or one 50-minute block. The booklets were distributed randomly to students and required about one hour to complete.

## The NAEP Geography Scale

Responses to the assessment tasks were analyzed to determine the percentages of students who responded correctly to each of the multiple-choice questions and the percentages attaining each of the possible scores for constructed-response questions. Item response theory (IRT) methods were used to produce within-grade scales that summarize results for each of the three content areas. Each subscale for grade 4 was linked to the corresponding subscale for grade 8. Likewise, each subscale for grade 12 was linked to the corresponding subscale for grade 8. Then, each linked subscale was mapped onto a 0 to 500 scale. These separate subscales were then weighted by the percentages shown in Table 1 to produce a composite NAEP geography scale, which is used in Chapter 2 to present results.

Though NAEP scales appear similar across subjects (e.g., all NAEP scales for the 1994 assessments range from 0 to 500), the reader is cautioned against making any comparisons among subjects. For each subject, unique scales are developed to describe student performance in the particular subject area.

## Achievement Levels

In addition to summarizing results using the NAEP geography scale, this report presents data using the geography achievement levels authorized by the NAEP legislation[2] and adopted by the National Assessment Governing Board (NAGB). The achievement levels were based on collective judgments — gathered from a broadly representative panel of teachers, education specialists, and members of the general public — about what students should know and be able to do relative to the body of content reflected in the NAEP assessment framework. Three achievement levels were defined for each of the grade levels assessed: *Basic*, *Proficient*, and *Advanced*. The policy definitions of these achievement levels are given in Figure 2. In reporting NAEP results, however, there are effectively four achievement-level categories: the percentages of students at or above each of the levels and the percentage below the *Basic* (lowest) level.

**Figure 2. Achievement Level Policy Definitions**

| | |
|---|---|
| *Basic* | This level denotes partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade. |
| *Proficient* | This level represents solid academic performance for each grade assessed. Students reaching this level have demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real world situations, and analytical skills appropriate to the subject matter. |
| *Advanced* | This level signifies superior performance. |

It should be noted that the setting of achievement levels on the national assessment is relatively new and in transition. Some evaluations have concluded that the percentages of students at certain levels may be underestimated.[3] On the other hand, critiques of those evaluations have found that such conclusions are not supported by the weight of the empirical evidence.[4]

The student achievement levels in this report have been developed carefully and responsibly, and have been subject to refinements and revisions in procedures as new technologies have become available. Upon reviewing of the available information, the Commissioner of NCES has judged that the achievement levels have a developmental status. However, the Commissioner and the National Assessment Governing Board also believe that the achievement levels are useful and valuable in reporting on the educational achievement of students in the United States.

## Overview of this Report

The two remaining chapters of this report present selected results in terms of NAEP *geography scale* and *student achievement levels*, respectively. Within each of these chapters, findings are presented for the nation, for the regions, and for the major reporting subgroups described below. More detailed descriptions of the reporting subgroups are presented in Appendix C.

- *Race/Ethnicity.* Estimates are reported for students' race/ethnicity (self-identified) using the following mutually exclusive categories: White, Black, Hispanic, Asian-American, Pacific Islander, and American Indian (including Alaskan Native).
- *Gender.* Estimates are reported separately for males and females.

- *Parents' Education Level.* Estimates are reported based on students' reports of the highest level of education attained by at least one of their parents: did not finish high school, graduated from high school, some education after high school, or graduated from college.
- *Public/Nonpublic Schools.* Estimates are reported for students attending public schools and nonpublic schools, including Catholic and other nonpublic schools.

This report examines and compares the geography performance of groups of students defined by shared demographic characteristics or responses to background questions (for example, males compared to females). It does not explore the relationships among combinations of these groups (for example, White males compared to Black males).

The means and percentages presented in the report are *estimates* because they are based on samples rather than the entire population(s). Consequently, the results are subject to a measure of uncertainty, reflected in the *standard error* of the estimate. Although standard errors are not provided with the estimates presented in this report, a full set of standard errors will be available in the *NAEP 1994 Geography Report Card.*

The comparisons presented in the report are based on statistical tests that consider both the magnitude of the difference between the group means or percentages and the standard errors of those statistics. Throughout this report, differences between reporting groups are defined as significant when they are significant from a statistical perspective. This means that observed differences are unlikely to be due to chance factors associated with sampling variability. All differences reported are statistically significant at the 0.05 level with appropriate adjustments for multiple comparisons. The term "significant," therefore, is not intended to imply a judgment about the absolute magnitude or educational relevance of the differences. The term is intended to identify statistically dependable *population* differences as an aid in focusing subsequent dialogue among policymakers, educators, and the public.

This report contains three appendices. Appendix A provides information about sampling. Appendix B contains sample assessment questions. Appendix C includes descriptions of the reporting subgroups. Detailed information about measurement methodology and data analysis techniques will be available in the forthcoming *NAEP 1994 Geography Report Card* and the *NAEP 1994 Technical Report.*

## Cautions in Interpretations

The reader is cautioned against making simple or causal inferences related to the performance of various subgroups of students or about the effectiveness of public and nonpublic schools. Average performance differences between two groups of students may be due in part to socioeconomic and other factors. For example, differences observed among racial/ethnic subgroups are almost certainly associated with a broad range of socioeconomic and educational factors not discussed in this report and possibly not addressed by the NAEP assessment program. Similarly, differences in performance between public and nonpublic school students may be better understood after accounting for factors such as composition of the student body, parents' education levels, and parental interest.

## Endnotes

1. *Geography Framework for the 1994 National Assessment of Educational Progress* (Washington, DC: National Assessment Governing Board, U.S. Department of Education, Government Printing Office).
2. P.L. 103-382. Improving America's Schools Act of 1994.
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# CHAPTER 2

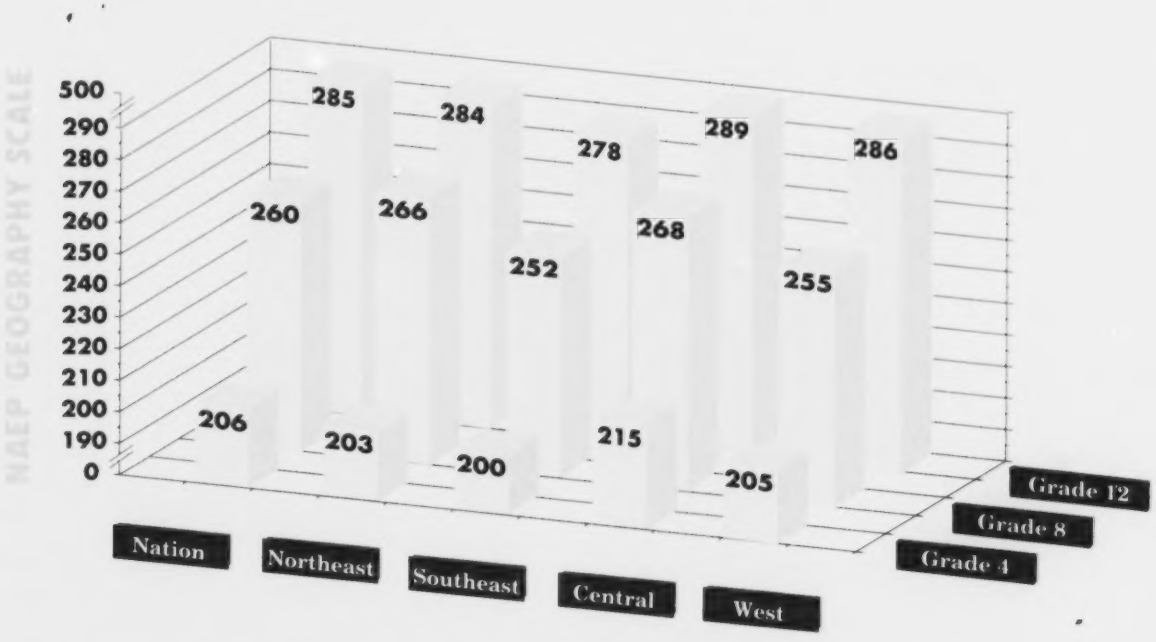
## A First Look at the Average NAEP Geography Scores of America's Students

This chapter reports the average geography scale scores of students in grades 4, 8, and 12. Findings are presented for the nation, by region, and for major subgroups of students. (Appendix B contains sample questions and question-level results from the NAEP 1994 geography assessment.) The differences in assessment performance discussed in this chapter are *statistically significant*. Other group and regional differences in geography performance may exist, but they are not statistically significant.

### Average Geography Scores for the Nation and by Region

Figure 3 and Table 2 present national and regional estimates of the average scores of fourth, eighth, and twelfth graders on the NAEP 1994 geography assessment. Across the nation, the average scores were 206 for fourth-graders, 260 for eighth-graders, and 285 for twelfth-graders. Among the various regions of the country, differences in NAEP geography scale scores were observed. At the fourth-grade level, students in the Central region outperformed those in the other three regions. At grade 8, students in the Northeast and Central regions had higher average scores than those in the Southeast and West. Among high school seniors, students in the Southeast had lower average scores than did those in each of the other regions.

**Figure 3. Average NAEP Geography Scores by Grade and by Region**




SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 Geography Assessment.

TABLE 2

## Average Geography Scores by Region

THE NATION'S REPORT CARD 1994 Geography Assessment

| | Percentage of Students | Average Scale Score |
|---|---|---|
| ***Grade 4*** | | |
| **Nation** | 100 | 206 |
| **Region** | | |
| Northeast | 22 | 203 |
| Southeast | 23 | 200 |
| Central | 25 | 215 |
| West | 30 | 205 |
| ***Grade 8*** | | |
| **Nation** | 100 | 260 |
| **Region** | | |
| Northeast | 20 | 266 |
| Southeast | 25 | 252 |
| Central | 24 | 268 |
| West | 31 | 255 |
| ***Grade 12*** | | |
| **Nation** | 100 | 285 |
| **Region** | | |
| Northeast | 21 | 284 |
| Southeast | 23 | 278 |
| Central | 28 | 289 |
| West | 29 | 286 |

The NAEP Geography scale ranges from 0 to 500.

The standard errors for the national averages are between 0.7 and 1.2 scale score points. The standard errors for the regional averages range from 1.1 to 3.2 scale score points.

Percentages may not total 100 due to rounding.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 Geography Assessment.

TABLE 3

## Average Geography Scores by Race/Ethnicity

THE NATION'S REPORT CARD 1994 Geography Assessment

| | Percentage of Students | Average Scale Score |
|---|---|---|
| ***Grade 4*** | | |
| **Nation** | 100 | 206 |
| **Race/Ethnicity** | | |
| White | 69 | 218 |
| Black | 15 | 168 |
| Hispanic | 12 | 183 |
| Asian | 2 | 218 |
| Pacific Islander | 1 | 205 |
| American Indian | 1 | 193 |
| ***Grade 8*** | | |
| **Nation** | 100 | 260 |
| **Race/Ethnicity** | | |
| White | 69 | 270 |
| Black | 15 | 229 |
| Hispanic | 11 | 239 |
| Asian | 2 | 271 |
| Pacific Islander | 1 ! | 252 ! |
| American Indian | 2 ! | 248 ! |
| ***Grade 12*** | | |
| **Nation** | 100 | 285 |
| **Race/Ethnicity** | | |
| White | 74 | 291 |
| Black | 12 | 258 |
| Hispanic | 8 | 268 |
| Asian | 3 | 287 |
| Pacific Islander | 1 ! | 282 ! |
| American Indian | 1 ! | *** |

The NAEP Geography scale ranges from 0 to 500.

The standard errors for the national averages are between 0.7 and 1.2 scale score points. The standard errors for the race/ethnicity averages range from 0.8 to 8.5 scale score points.

Percentages may not total 100 due to rounding or, in the case of the race/ethnicity variable, because some students categorized themselves as "other".

! Interpret with caution any comparisons involving this statistic. The nature of the sample does not allow for accurate determination of the variability of this value.

*** Sample size insufficient to permit a reliable estimate.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 Geography Assessment.

## Average Geography Scores by Major Reporting Subgroups

Tables 3 through 6 present average geography scale scores for major subgroups of the fourth-, eighth-, and twelfth-grade student populations.

***Race/Ethnicity.*** Table 3 presents average geography scores for racial/ethnic subgroups. The 1994 geography assessment, like NAEP assessments in other subject areas, showed substantial variation in the average performance among the different racial/ethnic subgroups. At all three grades, White and Asian students had significantly higher scores, on average, than did Black and Hispanic students. In addition, at all three grades the average scores of Hispanic students were higher than those of Black students. At grade 4, White and Asian students outperformed American Indian students. In turn, American Indian students exhibited a higher average proficiency than Black students. Finally at grade 4, Pacific Islander students scored significantly higher, on average, than Black and Hispanic students.

For the Pacific Islander and American Indian student samples at grades 8 and 12, the nature of the samples does not allow accurate determination of the standard errors. For this reason, differences among these samples and other racial/ethnic subgroups are not discussed.

***Gender.*** As can be seen in Table 4, the differences in average geography scores between males and females are fairly consistent. At all three grades, males had significantly higher scores, on average, than did females.

TABLE 4

**Average Geography Scores by Gender**

THE NATION'S REPORT CARD 1994

| | Percentage of Students | Average Scale Score |
|---|---|---|
| ***Grade 4*** | | |
| **Nation** | 100 | 206 |
| **Gender** | | |
| Male | 51 | 208 |
| Female | 49 | 203 |
| ***Grade 8*** | | |
| **Nation** | 100 | 260 |
| **Gender** | | |
| Male | 51 | 262 |
| Female | 49 | 258 |
| ***Grade 12*** | | |
| **Nation** | 100 | 285 |
| **Gender** | | |
| Male | 50 | 288 |
| Female | 50 | 281 |

The NAEP Geography scale ranges from 0 to 500.

The standard errors for the national averages are between 0.7 and 1.2 scale score points. The standard errors for the gender averages range from 0.8 to 1.4 scale score points.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 Geography Assessment.

***Parents' Education Level.*** As shown in Table 5, the NAEP 1994 geography results reveal a strong positive relationship between levels of parental education and student achievement. It should be noted that at grade 4 — and, to a lesser extent, grade 8 — substantial numbers of students do not know how much education their parents received. Furthermore, the accuracy of student-reported data is open to some question.[1] These caveats notwithstanding, the relationship between parental education and student performance remains striking.

At all grades, groups of students reporting given levels of parental education had significantly higher scores than all groups reporting lower levels of education. So, for example, students who reported that at least one parent had graduated from college displayed higher average scores than those who reported that at least one parent had some education after high school. The latter group in turn outperformed those who reported that at least one parent had graduated from high school. The sole exception to this pattern was at grade 4, where there was no statistically significant difference between students reporting that at least one parent was a college graduate and those reporting that at least one parent had received some education beyond high school.

TABLE 5

**Average Geography Scores by Parents' Education Level**

THE NATION'S REPORT CARD 1994

| | Percentage of Students | Average Scale Score |
|---|---|---|
| ***Grade 4*** | | |
| **Nation** | 100 | 206 |
| **Parents' Education Level** | | |
| Graduated College | 42 | 216 |
| Some Education After High School | 7 | 216 |
| Graduated High School | 12 | 197 |
| Did Not Finish High School | 4 | 186 |
| I Don't Know | 34 | 197 |
| ***Grade 8*** | | |
| **Nation** | 100 | 260 |
| **Parents' Education Level** | | |
| Graduated College | 42 | 272 |
| Some Education After High School | 19 | 265 |
| Graduated High School | 22 | 250 |
| Did Not Finish High School | 7 | 238 |
| I Don't Know | 10 | 234 |
| ***Grade 12*** | | |
| **Nation** | 100 | 285 |
| **Parents' Education Level** | | |
| Graduated College | 44 | 294 |
| Some Education After High School | 25 | 286 |
| Graduated High School | 22 | 274 |
| Did Not Finish High School | 7 | 263 |
| I Don't Know | 3 | 257 |

The NAEP Geography scale ranges from 0 to 500.

The standard errors for the national averages are between 0.7 and 1.2 scale score points. The standard errors for the parents' education level averages range from 0.9 to 3.7 scale score points.

Percentages may not total 100 due to rounding.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 Geography Assessment.

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***Public and Nonpublic Schools.*** Table 6 shows the NAEP 1994 geography results for students in public and nonpublic schools. As was the case in the NAEP 1994 reading and United States history assessments, students attending nonpublic schools (either Catholic schools or other nonpublic schools) had significantly higher average scores than did students attending public schools.

TABLE 6

**Average Geography Scores by Type of School**

THE NATION'S REPORT CARD 1994

| | Percentage of Students | Average Scale Score |
|---|---|---|
| ***Grade 4*** | | |
| **Nation** | 100 | 206 |
| **Type of School** | | |
| Public Schools | 90 | 204 |
| All Nonpublic Schools | 10 | 221 |
| Catholic Schools | 6 | 222 |
| Other Nonpublic Schools | 4 | 220 |
| ***Grade 8*** | | |
| **Nation** | 100 | 260 |
| **Type of School** | | |
| Public Schools | 90 | 258 |
| All Nonpublic Schools | 10 | 276 |
| Catholic Schools | 6 | 276 |
| Other Nonpublic Schools | 4 | 276 |
| ***Grade 12*** | | |
| **Nation** | 100 | 285 |
| **Type of School** | | |
| Public Schools | 89 | 283 |
| All Nonpublic Schools | 11 | 294 |
| Catholic Schools | 6 | 291 |
| Other Nonpublic Schools | 4 | 298 |

The NAEP Geography scale ranges from 0 to 500.

The standard errors for the national averages are between 0.7 and 1.2 scale score points. The standard errors for the type of school averages range from 0.8 to 3.8 scale score points.

The percentages of students in the two types of nonpublic schools may not total the percent in all nonpublic schools due to rounding.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 Geography Assessment.

As was noted in Chapter 1, the reader is cautioned against using these data to make simplistic inferences about the relative effectiveness of public and nonpublic schools. Average performance differences between the two types of schools are in part related to socioeconomic factors and sociological factors, such as levels of parental education. To get a clearer picture of the differences between public and nonpublic schools, more in-depth analyses must be undertaken.

## Endnotes

1. Looker, E.D., "Accuracy of proxy reports of parental status characteristics," in *Sociology of Education, 62(4),* pp. 257-276, 1989.

CHAPTER 3

# A First Look at Attainment of Achievement Levels by America's Students

The percentages of students who attained each of the achievement levels in the NAEP 1994 geography assessment are presented in this chapter. Results are displayed for the nation, for region, and for the major subgroups.

The National Education Statistics Act of 1994 requires that the National Assessment Governing Board develop "appropriate student performance levels" for reporting NAEP results. The NAEP law requires that these levels be "used on a developmental basis until the Commissioner of Education Statistics determines . . . that such levels are reasonable, valid, and informative to the public." It requires the Commissioner and the Board to make clear the developmental status of such levels.

The student achievement levels in this report have been developed and adopted by the National Assessment Governing Board, NAEP's independent policy-making body, with contributions from a wide variety of educators, business and government leaders, and interested citizens. These levels of student achievement have been established to help Americans answer two questions that are important to parents and to all citizens in the communities and nation in which we live. These questions are: "What should students know and be able to do as they progress and graduate from school?" and "How good is good enough in terms of student achievement on NAEP?" Answering these questions obviously involves judgements. The National Assessment Governing Board is not suggesting that there is a single answer to these questions. Rather, the Board is trying to put forward reasonable judgements that can inform citizens across America — information they can use to answer these questions in their own schools and communities.

Developing carefully considered judgements about "what students should know and be able to do" and "how good is good enough" is both difficult and controversial. The Governing Board believes that these questions are so important that answers must be sought in an informed, responsible way. The process is subject to revision and refinement as appropriate.

The student achievement levels in this report approved by the Governing Board are the result of many hours of work. The levels are based on preliminary descriptions developed as part of the national consensus process to determine the assessment design and content. The Board's contractor, American College Testing (ACT), which has extensive experience in standard-setting in many fields, designed the achievement level-setting process. This process was reviewed by scores of individuals, including policymakers, professional organizations, teachers, parents, and other members of the general public. To develop the levels, ACT convened a cross-section of educators and interested citizens from across the nation and asked them to recommend what students should know and be able to do in geography. Prior to adopting these levels of student achievement, the Board engaged a large number of persons to comment on the recommended levels and to review the results.

The result of the achievement level setting process is a set of achievement level descriptions, a set of achievement level cutpoints on the 500-point NAEP scale, and exemplar items. The cutpoints are minimum scores that define basic, proficient, and advanced performance at grades 4, 8, and 12. At present, evaluations conducted on the level setting process and critiques of these evaluations have provided mixed reviews. Therefore, both the Governing Board and the Commissioner of Education Statistics regard the achievement levels as developmental; they should not be interpreted as statistically conclusive. Because these levels are still considered developmental, the reader of this report is advised to consider that status when interpreting the results. The reader should recognize that the results are based on the judgements of panels, approved by the Governing Board, of what advanced, proficient, and basic students should know and be able to do in each subject assessed, as well as on their judgements regarding what percent of students at the borderline for each level should answer each test item correctly. The latter information is used in translating the achievement level descriptions into cutpoints on the NAEP scale. NCES uses these levels in reporting NAEP results, but it does not currently adjudicate the reliability or validity of these achievement levels. Rather they are reported directly as adopted by the Governing Board.

The National Assessment Governing Board urges all who are concerned about "what students should know and be able to do" and "how good is good enough" to read and interpret these performance levels recognizing that this is a developing, judgmental process and is subject to various interpretations. The decision to

include the levels in NAEP reports is an attempt to make the assessment results more useful for parents, educators, and policymakers by providing performance standards against which to measure educational progress.

As explained in Chapter 1, three achievement levels — *Basic*, *Proficient*, and *Advanced* — have been established by the National Assessment Governing Board (NAGB) for reporting NAEP results. The *Basic* level denotes partial mastery of the knowledge and skills that are fundamental for proficient work at a given grade. The *Proficient* level represents solid academic performance. Students reaching this level demonstrate competency with a range of challenging subject matter. The *Advanced* level signifies superior performance at a given grade.

Specific definitions of the three levels of geography achievement for each of the three grades are presented in Figure 4. For each grade, the definitions are cumulative from *Basic* through *Advanced*. In other words, students performing at the *Proficient* level also display the competencies associated with the *Basic* level; and students performing at the *Advanced* level demonstrate skills and knowledge associated with both preceding levels.

As part of the development of the achievement levels, NAGB also selected student responses that, in the judgement of the panelists, illustrated the levels. Figure 5 presents an eighth-grade question and three student responses corresponding to the three achievement levels. Accompanying the question is a table that presents two types of percentages: (1) the overall percentage of students within a grade who successfully answered the question, and (2) the percentages of students within each of the achievement level intervals — *Basic, Proficient, and Advanced* — who answered the question successfully. For the question presented in Figure 5, 41 percent of all eighth graders provided answers rated "Essential" or better as described in the scoring rubric. For those eighth graders who scored within the *Basic* and *Proficient* achievement level intervals, 39 and 78 percent, respectively, provided answers rated as "Essential" or better. The vast majority of eighth graders (92 percent) who scored within the *Advanced* achievement level interval provided such answers. The standard errors associated with each percentage are also included in the table. (Appendix B contains additional sample questions from the NAEP 1994 geography assessment.)

**Figure 4. Geography Achievement Levels**

**GRADE 4**

| | |
|---|---|
| *Basic* (187) | Students should be able to use words or diagrams to define basic geographic vocabulary; identify personal behaviors and perspectives related to the environment and describe some environmental and cultural issues in their community; use visual and technological tools to access information; identify major geographic features on maps and globes; be able to read and draw simple maps, map keys and legends; demonstrate how people depend upon, use, and adapt to the environment; and give examples of the movement of people, goods, services, and ideas from one place to another. In addition to demonstrating an understanding of how individuals are alike and different, they should demonstrate a knowledge of the ways people depend on each other. |
| *Proficient* (240) | Students should be able to use fundamental geographic knowledge and vocabulary to identify basic geographic patterns and processes; describe an environmental or cultural issue from more than one perspective; and read and interpret information from visual and technological tools such as photographs, maps and globes, aerial photography, and satellite images. They should be able to use number and letter grids to plot specific locations; understand relative location terms; and sketch simple maps and describe and/or draw landscapes they have observed or studied. Proficient students should be able to illustrate how people depend upon, adapt to, and modify the environment, describe and/or illustrate geographic aspects of a region using fundamental geographic vocabulary and give reasons for current human migration; discuss the impact a location has upon cultural similarities and differences; and be able to demonstrate how an event in one location can have an impact upon another location. |
| *Advanced* (276) | Students should be able to use basic geographic knowledge and vocabulary to describe global patterns and processes; describe ways individuals can protect and enhance environmental quality; describe how modifications to the environment may have a variety of consequences; explain differing perspectives that apply to local environmental or cultural issues; and demonstrate an understanding of forces that result in migration, changing demographics, and boundary changes. They should be able to solve simple problems by applying information learned through working with visual and technological tools such as aerial and other photographs, maps and globes, atlases, news media, and computers. They should be able to construct models and sketch and label maps of their own state, the United States, and the world; use them to describe and compare differences, similarities, and patterns of change in landscapes; and be able to predict the impact a change in one location can have on another. They should be able to analyze the ways individuals and groups interact. |

**Figure 4. Geography Achievement Levels (continued)**

## GRADE 8

| | |
|---|---|
| *Basic* (242) | Students should possess fundamental knowledge and vocabulary of concepts relating to patterns, relationships, distance, direction, scale, boundary, site, and situation; solve fundamental locational questions using latitude and longitude; interpret simple map scales; identify continents and their physical features, oceans, and various countries and cities; respond accurately to descriptive questions using information obtained by use of visual and technological tools such as geographic models and/or translate that information into words; explain differences between maps and globes; and find a wide range of information using an atlas or almanac. Students should be able to recognize and illustrate the relationships that exist between humans and their environments, and provide evidence showing how physical habitat can influence human activity. They should be able to define a region and identify its distinguishing characteristics. Finally, they should be able to demonstrate how the interaction that takes place between and among regions is related to the movement of people, goods, services, and ideas. |
| *Proficient* (282) | Students should possess a fundamental geographic vocabulary; understand geography's analytical concepts; solve locational questions requiring integration of information from two or more sources, such as atlases or globes; compare information presented at different scales; identify a wide variety of physical and cultural features and describe regional patterns. Students should be able to respond accurately to interpretive questions using geography's visual and technological tools and translate that information into patterns; identify differences in map projections and select proper projections for various purposes; and develop a case study working with geography's analytical concepts. In addition, students should be able to describe the physical and cultural characteristics of places; explain how places change due to human activity; explain and illustrate how the concept of regions can be used as a strategy for organizing and understanding Earth's surface. Students should be able to analyze and interpret data bases and case studies as well as use information from maps to describe the role that regions play in influencing trade and migration patterns and cultural and political interaction. |
| *Advanced* (315) | Students should have a command of extensive geographic knowledge, analytical concepts, and vocabulary; be able to analyze spatial phenomena using a variety of sources with information presented at a variety of scales and show relationships between them; and use case studies for spatial analysis and to develop maps and other graphics. Students should be able to identify patterns of climate, vegetation, and population across Earth's surface and interpret relationships between and among these patterns, and use one category of a map or aerial photograph to predict other features of a place such as vegetation based on climate or population density based on topographic features. Students should also be able to relate the concept of region to specific places and explain how regions change over time due to a variety of factors. They should be able to profile a region of their own design using geographic concepts, tools, and skills. |

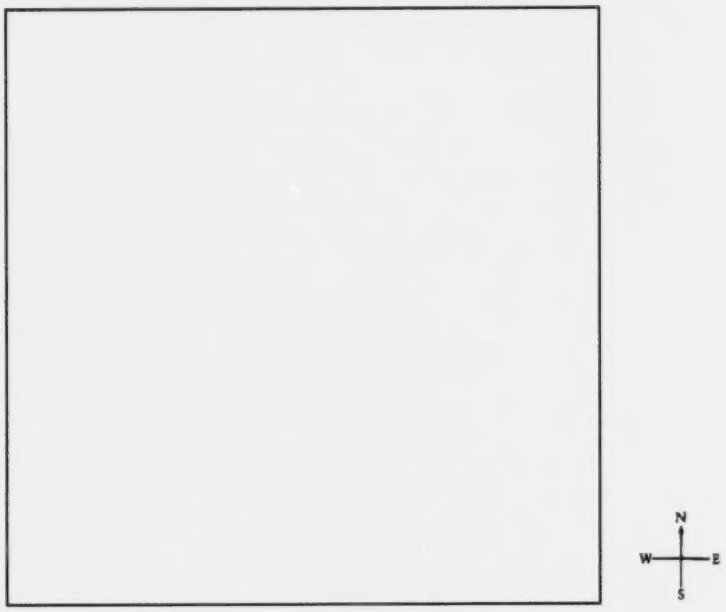
## GRADE 12

| | |
|---|---|
| *Basic* (270) | Students should possess a knowledge of concepts and terms commonly used in physical and human geography as well as skills enabling them to employ applicable units of measurement and scale when solving simple locational problems using maps and globes. They should be able to read maps; provide examples of plains, plateaus, hills, and mountains; and locate continents, major bodies of water, and selected countries and cities. They should be able to interpret geographic data and use visual and technological tools such as charts, tables, cartograms, and graphs; know the nature of and be able to identify several basic types of map projections; understand the basic physical structure of the planet; explain and apply concepts such as continental drift and plate tectonics; and describe geography's analytical concepts using case studies. Students should have a comprehensive understanding of spatial relationships including the ability to recognize patterns that exist across Earth in terms of phenomena, including climate regions, time zones, population distributions, availability of resources, vegetation zones, and transportation and communication networks. They should be able to develop data bases about specific places and provide a simple analysis about their importance. |
| *Proficient* (305) | Students should have an extensive understanding and knowledge of the concepts and terminology of physical and human geography. They should be able to use geographic concepts to analyze spatial phenomena and to discuss economic, political and social factors that define and interpret space. They should be able to do this through the interpretation of maps and other visual and technological tools, through the analysis of case studies, the utilization of data bases, and the selection of appropriate research materials. Students should be able to design their own maps based on descriptive data; describe the physical and cultural attributes of major world regions; relate the spatial distribution of population to economic and environmental factors; report both historical and contemporary events within a geographic framework using tools such as special purpose maps, and primary and secondary source materials. |
| *Advanced* (339) | Students should possess a comprehensive understanding of geographic knowledge and concepts; apply this knowledge to case studies; formulate hypotheses and test geographic models that demonstrate complex relationships between physical and human phenomena; apply a wide range of map skills; develop maps using fundamental cartographic principles including translating narratives about places and events into graphic representations, and use other visual and technological tools to perform locational analysis and interpret spatial relationships. Students should also be able to undertake sophisticated analysis from aerial photographs or satellite imagery and other visuals. Advanced students should be able to develop criteria assessing issues relating to human spatial organization and environmental stability and, through research skills and the application of critical thinking strategies, identify alternative solutions. They should be able to compile data bases from disparate pieces of information and from these data develop generalizations and speculations about outcomes when data change. |

**Figure 5. Geography Achievement Level Illustration – Grade 8 Exercise**

**After we anchored our ships in the ocean and went ashore to explore, we marched west. The forest was so thick we could only travel three miles in the first two days. Then we came to the mountains and climbed to the top. A rushing river flowed west out of the mountains. We continued to march two miles west and came down out of the mountains. Two miles further we came to the coast. It was obvious that the area we were exploring was an isthmus.**

**In the box below, draw a map of the region described above. Be sure to include all of the geographical elements mentioned in the description. Include a scale to indicate distances.**




A **Complete** response includes an accurate map in which at least four elements are correctly placed. The response must be an isthmus and have direction of travel and river correctly indicated.

An **Essential** response includes a map in which three elements are correctly placed. The response may be a peninsula or an island.

A **Partial** response includes a map in which at least two elements are correctly placed.

| *Grade 8* | Percentage "Essential" or Better within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Essential or Better** | ***Basic*** **242-281*** | ***Proficient*** **282-314*** | ***Advanced*** **315 and above*** |
| **41 (1.3)** | **39 (2.4)** | **78 (3.4)** | **92 (4.8)** |

* NAEP geography composite scale range.

The percentage of students below *Basic* who successfully answered the question is not included in the table. However, these students are included in the overall percentage.

The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**Figure 5. Geography Achievement Level Illustration – Grade 8 Exercise (continued)**

The following samples of students' responses were selected by the National Assessment Governing Board (NAGB) to be illustrative for the three achievement levels they established for the 1994 NAEP geography assessment. The scoring guide or rubric presented on page 12 was used in rating students' responses. The responses were not scored using the NAGB achievement level descriptions as guides. Students within any of the three achievement levels would be expected to vary in terms of their performance on any given question. The sample response presented were selected to illustrate what a typical student in a given achievement level was capable of producing.

**Basic - Grade 8**

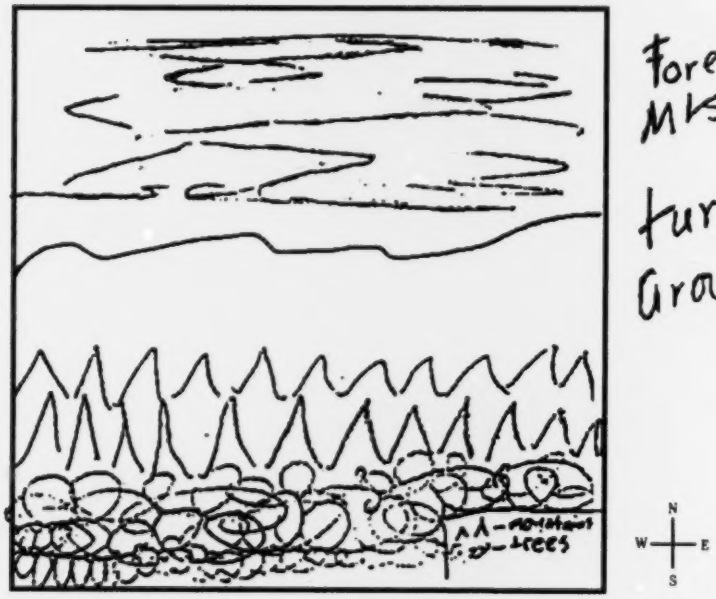


**Figure 5. Geography Achievement Level Illustration – Grade 8 Exercise (continued)**

Proficient - Grade 8

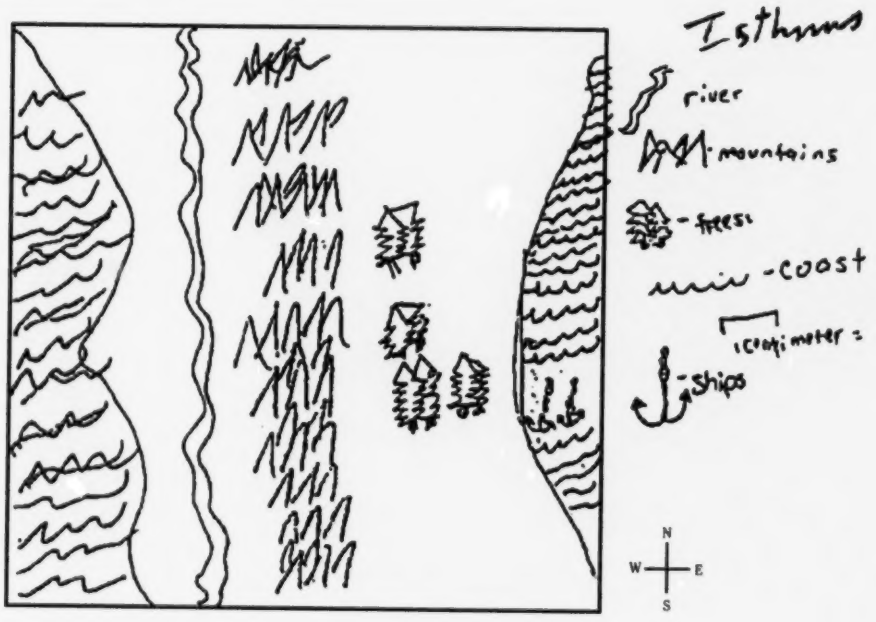
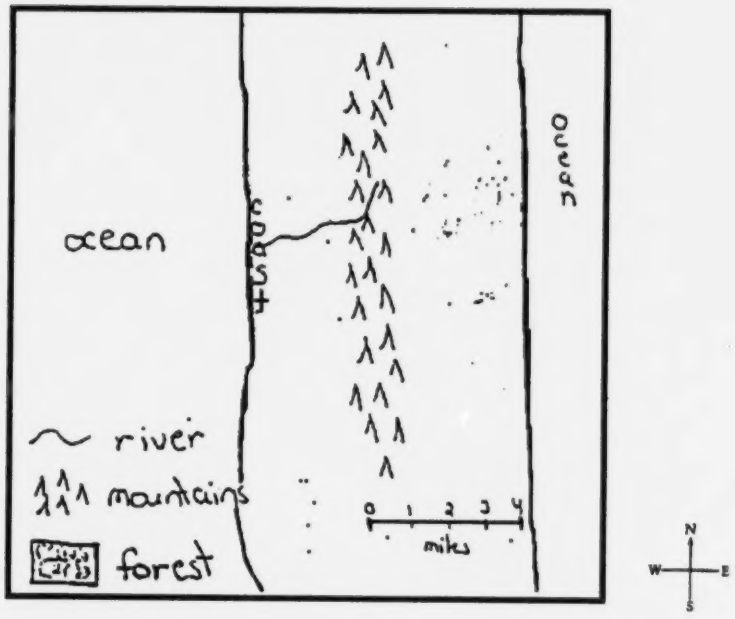


**Figure 5. Geography Achievement Level Illustration – Grade 8 Exercise (continued)**

**Advanced - Grade 8**



## Achievement Level Results for the Nation

The percentages of students performing at or above the three achievement levels are shown in Table 7. At all three grades, at least 70 percent of students were able to reach the *Basic* level. However, a far smaller proportion of students — roughly one-quarter — were able to reach the *Proficient* level that signifies solid performance. Among high school seniors, 27 percent were classified as *Proficient* or *Advanced*. At grades 4 and 8, the percentages of students reaching the *Proficient* level were 22 and 28, respectively. Finally, 3 percent of fourth graders, 4 percent of eighth graders, and 2 percent of twelfth graders reached the *Advanced* level. (Note that the percentage of students below *Basic* is 100 percent minus the percentage at or above *Basic*.)

TABLE 7

### Geography Achievement Levels by Region

| | | Percentage of Students | | | |
|---|---|---|---|---|---|
| | Percentage of All Students | At or Above Advanced | At or Above Proficient | At or Above Basic | Below Basic |
| ***Grade 4*** | | | | | |
| **Nation** | 100 | 3 | 22 | 70 | 30 |
| **Region** | | | | | |
| Northeast | 22 | 3 | 22 | 67 | 33 |
| Southeast | 23 | 2 | 17 | 64 | 36 |
| Central | 25 | 4 | 28 | 78 | 22 |
| West | 30 | 3 | 21 | 70 | 30 |
| ***Grade 8*** | | | | | |
| **Nation** | 100 | 4 | 28 | 71 | 29 |
| **Region** | | | | | |
| Northeast | 20 | 6 | 33 | 76 | 24 |
| Southeast | 25 | 3 | 21 | 62 | 38 |
| Central | 24 | 6 | 36 | 80 | 20 |
| West | 31 | 3 | 23 | 67 | 33 |
| ***Grade 12*** | | | | | |
| **Nation** | 100 | 2 | 27 | 70 | 30 |
| **Region** | | | | | |
| Northeast | 21 | 2 | 25 | 69 | 31 |
| Southeast | 23 | 1 | 20 | 60 | 40 |
| Central | 28 | 2 | 32 | 75 | 25 |
| West | 29 | 2 | 29 | 72 | 28 |

The standard errors for the (a) Advanced Level, national percentages range from 0.4 to 0.5; (b) Proficient Level, national percentages range from 1.0 to 1.2; and (c) Basic Level, national percentages range from 0.9 to 1.1

The standard errors for the (a) Advanced Level, regional percentages range from 0.5 to 1.3; (b) Proficient Level, regional percentages range from 1.3 to 3.3; and (c) Basic Level, regional percentages range from 1.5 to 2.7.

Percentages of students in the region may not total 100 due to rounding.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 Geography Assessment.

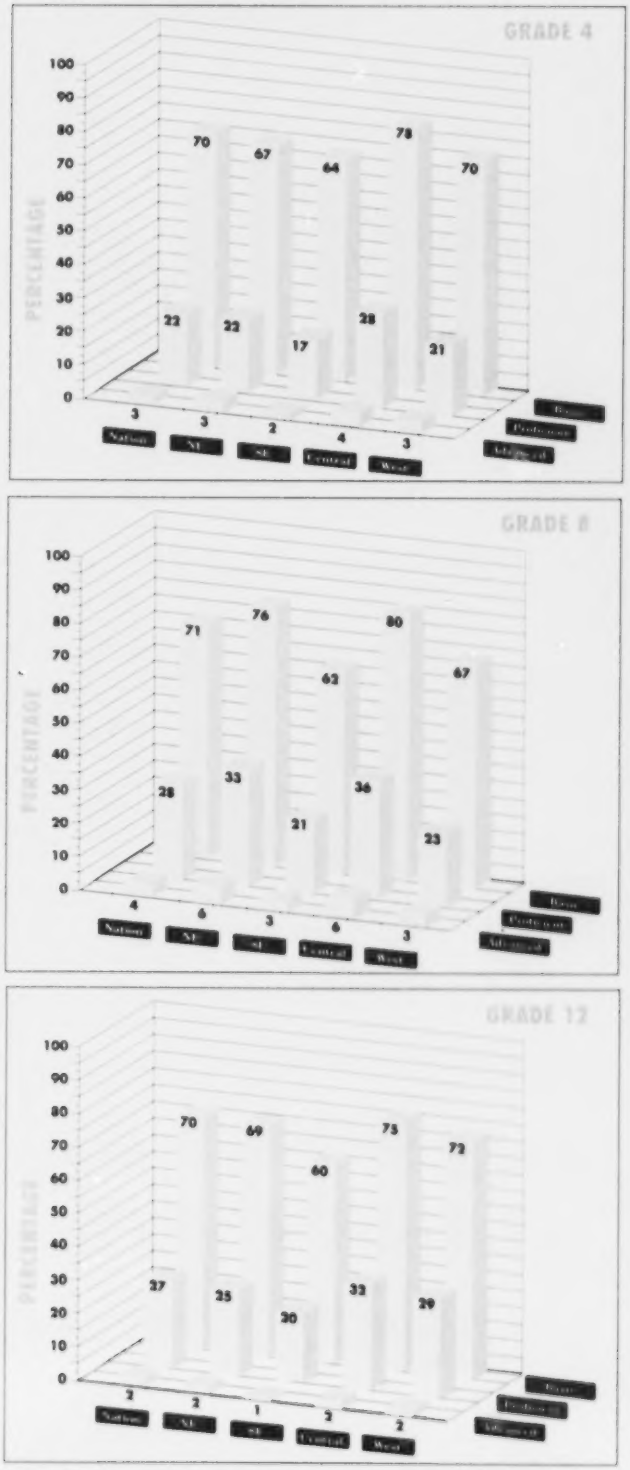
## Achievement Level Results by Region

Table 7 and Figure 6 show the regional percentages of students scoring at or above each geography achievement level. There were few statistically significant differences among regions at the fourth grade level. The percentages of students at or above the *Basic* and *Proficient* levels were significantly higher for the Central region compared to the Southeast region. Also at grade 4, the percentage of students at or above the *Basic* level was higher for the Central region than the Northeast.

Eighth graders in the Northeast and Central regions were more likely to perform at or above the *Basic* level as well as *Proficient* level than were students in the Southeast and West regions. Also, eighth-grade students in the Central region were more likely to score at the *Advanced* level than were students in the Southeast region.

At grade 12, students in the Southeast were less likely to be at or above the *Basic* level than were those in the other three regions. Also, high school seniors in the Southeast were less likely to be at or above the *Proficient* level than were students in the West and Central regions.

**Figure 6. Percent of Students At or Above the Geography Achievement Levels by Grade and by Region**




NE — Northeast SE — Southeast

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 Geography Assessment.

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## Achievement Levels by Major Reporting Subgroups

Tables 8 through 11 present the percentages of students in various subgroups scoring at or above each of the three achievement levels. Again, the discussion of the findings is limited to *statistically significant differences* between subgroups.

***Race/Ethnicity.*** The achievement levels that students in particular racial/ethnic subgroups attained are shown in Table 8. As in other NAEP assessments, there were substantial subgroup differences. At grade 4, White students were more likely to attain each of the three achievement levels than were Black and Hispanic students. Further, White students had a higher probability of reaching the *Basic* or *Proficient* levels than did American Indian students. Asian students were

TABLE 8

### Geography Achievement Levels by Race/Ethnicity

THE NATION'S REPORT CARD 1994

| | | Percentage of Students | | | |
|---|---|---|---|---|---|
| | Percentage of All Students | At or Above Advanced | At or Above Proficient | At or Above Basic | Below Basic |
| ***Grade 4*** | | | | | |
| **Nation** | 100 | 3 | 22 | 70 | 30 |
| **Race/Ethnicity** | | | | | |
| White | 69 | 4 | 29 | 81 | 19 |
| Black | 15 | 0 | 3 | 34 | 66 |
| Hispanic | 12 | 1 | 10 | 49 | 51 |
| Asian | 2 | 5 | 32 | 79 | 21 |
| Pacific Islander | 1 | 1 | 17 | 70 | 30 |
| American Indian | 1 | 0 | 9 | 62 | 38 |
| ***Grade 8*** | | | | | |
| **Nation** | 100 | 4 | 28 | 71 | 29 |
| **Race/Ethnicity** | | | | | |
| White | 69 | 5 | 36 | 82 | 18 |
| Black | 15 | 0 | 5 | 34 | 66 |
| Hispanic | 11 | 1 | 10 | 50 | 50 |
| Asian | 2 | 8 | 40 | 79 | 21 |
| Pacific Islander | 1 ! | 3 ! | 15 ! | 63 ! | 37 ! |
| American Indian | 2 ! | 2 ! | 15 ! | 59 ! | 41 ! |
| ***Grade 12*** | | | | | |
| **Nation** | 100 | 2 | 27 | 70 | 30 |
| **Race/Ethnicity** | | | | | |
| White | 74 | 2 | 33 | 78 | 22 |
| Black | 12 | 0 | 5 | 32 | 68 |
| Hispanic | 8 | 0 | 10 | 48 | 52 |
| Asian | 3 | 3 | 32 | 69 | 31 |
| Pacific Islander | 1 ! | 1 ! | 19 ! | 69 ! | 31 ! |
| American Indian | 1 ! | *** | *** | *** | *** |

The standard errors for the (a) Advanced Level, national percentages range from 0.4 to 0.5; (b) Proficient Level, national percentages range from 1.0 to 1.2; and (c) Basic Level, national percentages range from 0.9 to 1.1.

The standard error for the (a) Advanced Level, race/ethnicity percentages range from 0.2 to 3.6; (b) Proficient Level, race/ethnicity percentages range from 1.3 to 3.3; and (c) Basic Level, race/ethnicity percentages range from 1.5 to 2.7.

! Interpret with caution any comparisons involving this statistic. The nature of the sample does not allow for accurate determination of the variability of this value.

Percentages may not total 100 due to rounding or, in the case of the race/ethnicity variable, because some students categorized themselves as "other".

The estimates of population percentages reported as zero (and standard errors reported as 0.0) are actually non-zero but rounded to zero when reporting to the nearest integer (or nearest tenth in the case of the standard errors).

*** Sample size insufficient to permit a reliable estimate.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 Geography Assessment.

more likely than Black and Hispanic students to perform at or above the *Proficient* and *Basic* levels and more likely than American Indian students to be at or above the *Proficient* level. The percentage of Pacific Islander students who were classified at or above the *Basic* level was significantly higher than that of Black and Hispanic students. Finally, Hispanic and American Indian students were more likely to perform at or above the *Basic* level than were their Black counterparts.

The pattern evidenced at grade 4 was repeated at grade 8. However, at grade 12 there were fewer significant differences across the racial/ethnic subgroups than there were at the other grades. No significant differences among racial/ethnic subgroups were detected for the percentage of students reaching the *Advanced* level. White and Asian students were more likely than Black and Hispanic students to reach the *Basic* and *Proficient* levels. Finally, Hispanic students were more likely than Black students to score at or above the *Basic* level.

As was mentioned in Chapter 2, the nature of the eighth and twelfth grade Pacific Islander and American Indian student samples does not allow accurate determination of the standard errors. For this reason, differences among these samples and other racial/ethnic subgroups are not discussed.

When considering these data, readers should keep in mind the cautions about interpreting group differences that are discussed in Chapter 1. A further reason for caution is that while the percentages of White students scoring at the *Advanced* level are larger (in a statistically significant sense) than the percentages of Black students or Hispanic students (at grades 4 and 8), the practical importance of these differences may be limited by the small numbers of students reaching the *Advanced* level.

***Gender.*** Table 9 presents achievement level results for males and females. At grades 4 and 8 males were more likely than females to score at or above the *Proficient* level and at the *Advanced* level. At grade 12, males were more likely than females to score at or above the *Basic* level and at or above the *Proficient* level.

TABLE 9

**Geography Achievement Levels by Gender**

THE NATION'S REPORT CARD 1994

| | | Percentage of Students | | | |
|---|---|---|---|---|---|
| | Percentage of All Students | At or Above Advanced | At or Above Proficient | At or Above Basic | Below Basic |
| ***Grade 4*** | | | | | |
| **Nation** | 100 | 3 | 22 | 70 | 30 |
| **Gender** | | | | | |
| Male | 51 | 4 | 26 | 71 | 29 |
| Female | 49 | 2 | 19 | 68 | 32 |
| ***Grade 8*** | | | | | |
| **Nation** | 100 | 4 | 28 | 71 | 29 |
| **Gender** | | | | | |
| Male | 51 | 5 | 30 | 72 | 28 |
| Female | 49 | 3 | 25 | 69 | 31 |
| ***Grade 12*** | | | | | |
| **Nation** | 100 | 2 | 27 | 70 | 30 |
| **Gender** | | | | | |
| Male | 50 | 2 | 32 | 73 | 27 |
| Female | 50 | 1 | 22 | 67 | 33 |

The standard errors for the (a) Advanced Level, national percentages range from 0.4 to 0.5; (b) Proficient Level, national percentages range from 1.0 to 1.2; and (c) Basic Level, national percentages range from 0.9 to 1.1

The standard errors for the (a) Advanced Level, gender percentages range from 0.4 to 0.7; (b) Proficient Level, gender percentages range from 1.1 to 1.7; and (c) Basic Level, gender percentages range from 1.1 to 1.4.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 Geography Assessment.

***Parents' Education Level.*** As shown in Table 10, parental education and student achievement are positively related. This mirrors the average proficiency results discussed in the previous chapter. At all three grades, students who reported that at least one parent had graduated from college were more likely to reach the *Advanced* level than were those reporting that their parents had a high school or lower level of education. Also at grade 8, students who reported that at least one parent had graduated from college were more likely to reach the *Advanced* level than those reporting that their parents had some education after high school.

At the *Proficient* and *Basic* levels, the patterns were similar. At grade 4, students who reported that at least one parent graduated from college or had some education after high school were more likely to be at or above the *Basic* and *Proficient* levels than those reporting that their parents had a high school or lower level of education. At grades 8 and 12, students reporting that their parents had achieved a given level of education were more likely than those reporting lower levels of parental education to reach one of the three achievement ranges. For example, at grade 12, students who reported that at least one parent graduated from college were more likely to score at or above the *Basic* and *Proficient* levels than were students who reported that at least one parent had achieved some education after high school. The latter group was more likely to score at or above the *Basic* and *Proficient* levels than were students who reported at least one parent graduated from high school; they, in turn, showed higher achievement than those who reported that neither parent had finished high school. The exception to this rule was at grade 8, where there were no significant differences in the percentage of students at or above the *Basic* level who reported that at least one parent graduated from college and those who reported at least one parent had some education after high school.

It should be noted that one-third of fourth graders and one-tenth of eighth graders did not know their parents' level of education. Also, as was noted previously, the accuracy of student self-reported data may be open to some question. Nonetheless, the positive relationship between parental education and achievement in geography remains striking.

TABLE 10

## Geography Achievement Levels by Parents' Education Level

THE NATION'S REPORT CARD 1994

| | | Percentage of Students | | | |
|---|---|---|---|---|---|
| | Percentage of All Students | At or Above Advanced | At or Above Proficient | At or Above Basic | Below Basic |
| ***Grade 4*** | | | | | |
| **Nation** | 100 | 3 | 22 | 70 | 30 |
| **Parents' Education Level** | | | | | |
| Graduated College | 42 | 5 | 31 | 78 | 22 |
| Some Education After High School | 7 | 3 | 30 | 80 | 20 |
| Graduated High School | 12 | 1 | 15 | 63 | 37 |
| Did Not Finish High School | 4 | 0 | 8 | 52 | 48 |
| I Don't Know | 34 | 1 | 14 | 63 | 37 |
| ***Grade 8*** | | | | | |
| **Nation** | 100 | 4 | 28 | 71 | 29 |
| **Parents' Education Level** | | | | | |
| Graduated College | 42 | 7 | 41 | 82 | 18 |
| Some Education After High School | 19 | 3 | 29 | 79 | 21 |
| Graduated High School | 22 | 1 | 15 | 62 | 38 |
| Did Not Finish High School | 7 | 1 | 8 | 47 | 53 |
| I Don't Know | 10 | 1 | 8 | 44 | 56 |
| ***Grade 12*** | | | | | |
| **Nation** | 100 | 2 | 27 | 70 | 30 |
| **Parents' Education Level** | | | | | |
| Graduated College | 44 | 3 | 40 | 81 | 19 |
| Some Education AfterHigh School | 25 | 1 | 24 | 75 | 25 |
| Graduated High School | 22 | 0 | 14 | 56 | 44 |
| Did Not Finish High School | 7 | 0 | 7 | 41 | 59 |
| I Don't Know | 3 | 0 | 7 | 36 | 64 |

The standard errors for the (a) Advanced Level, national percentages range from 0.4 to 0.5; (b) Proficient Level, national percentages range from 1.0 to 1.2; and (c) Basic Level, national percentages range from 0.9 to 1.1

The standard error for the (a) Advanced Level, parents' education level percentages range from 0.3 to 1.4; (b) Proficient Level, parents' education level percentages range from 1.1 to 3.4; and (c) Basic Level, parents' education level percentages range from 1.1 to 5.2.

The estimates of population percentages reported as zero (and standard errors reported as 0.0) are actually non-zero but rounded to zero when reporting to the nearest integer (or nearest tenth in the case of the standard errors).

Percentages of students in the subgroups may not total 100 due to rounding.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 Geography Assessment.

***Public and Nonpublic Schools.*** Achievement level results for students in public and nonpublic schools are shown in Table 11. At all grades, nonpublic school students were significantly more likely than their public school counterparts to perform at or above both the *Basic* and *Proficient* levels. At the eighth grade, nonpublic school students were also more likely to perform at the *Advanced* level.

As was noted in Chapter 1, the reader is cautioned against making simplistic inferences about the relative effectiveness of public and nonpublic schools from these data. Achievement level differences between the two types of schools are in part related to socioeconomic factors and sociological factors, such as levels of parental education. To get a clearer picture of the differences between public and nonpublic schools, more in-depth analyses are needed.

TABLE 11

## Geography Achievement Levels by Type of School

| | | Percentage of Students | | | |
|---|---|---|---|---|---|
| | Percentage of All Students | At or Above Advanced | At or Above Proficient | At or Above Basic | Below Basic |
| ***Grade 4*** | | | | | |
| **Nation** | 100 | 3 | 22 | 70 | 30 |
| **Type of School** | | | | | |
| Public Schools | 90 | 3 | 21 | 68 | 32 |
| All Nonpublic Schools | 10 | 5 | 30 | 84 | 16 |
| Catholic Schools | 6 | 5 | 30 | 85 | 15 |
| Other Nonpublic Schools | 4 | 4 | 30 | 82 | 18 |
| ***Grade 8*** | | | | | |
| **Nation** | 100 | 4 | 28 | 71 | 29 |
| **Type of School** | | | | | |
| Public Schools | 90 | 4 | 26 | 69 | 31 |
| All Nonpublic Schools | 10 | 8 | 44 | 87 | 13 |
| Catholic Schools | 6 | 8 | 44 | 89 | 11 |
| Other Nonpublic Schools | 4 | 7 | 45 | 86 | 14 |
| ***Grade 12*** | | | | | |
| **Nation** | 100 | 2 | 27 | 70 | 30 |
| **Type of School** | | | | | |
| Public Schools | 89 | 1 | 26 | 68 | 32 |
| All Nonpublic Schools | 11 | 3 | 36 | 83 | 17 |
| Catholic Schools | 6 | 1 | 33 | 80 | 20 |
| Other Nonpublic Schools | 4 | 5 | 40 | 87 | 13 |

The standard errors for the (a) Advanced Level, national percentages range from 0.4 to 0.5; (b) Proficient level, national percentages range from 1.0 to 1.2; and (c) Basic Level, national percentages range from 0.9 to 1.1

The standard error for the (a) Advanced Level, type of school percentages range from 0.4 to 2.0; (b) Proficient level, type of school percentages range from 1.0 to 4.8; and (c) Basic Level, type of school percentages range from 1.0 to 3.9.

The percentages of students in the two types of nonpublic schools may not total the percent in all nonpublic schools due to rounding.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 Geography Assessment.

# APPENDIX A

## National Sample Descriptions

The national and regional results presented in this report are based on nationally representative probability samples of fourth-, eighth-, and twelfth-grade students. The samples were selected using a multistage design involving the sampling of students from selected schools within selected geographic areas across the country. The sample design had the following stages:

1) selection of geographic areas (counties or groups of counties)

2) selection of schools (both public and nonpublic) within the selected areas

3) selection of students within selected schools

Each selected school that participated in the assessment, and each student assessed, represents a portion of the population of interest. To make valid inferences from the student samples to the respective populations from which they were drawn, sampling weights are needed. Sampling weights are required to account for disproportionate representation due to oversampling of students attending schools with a high concentration of Black and/or Hispanic students, and due to oversampling of students from nonpublic schools. Lower sampling rates for very small schools must also be accounted for with the sampling weights.

The national sample includes students attending domestic Department of Defense schools and Bureau of Indian Affairs schools. (Students attending overseas Department of Defense schools and schools in United States territories were not sampled.)

Table A.1 summarizes the weighted and unweighted student sample sizes for the NAEP geography assessment. The numbers reported include both public and nonpublic school students.

TABLE A.1

**Unweighted and Weighted Sample Sizes by Grade for the NAEP1994 Geography Assessment, Public and Nonpublic Schools**

THE NATION'S REPORT CARD 1994 Geography Assessment

| | Unweighted Sample Size (and Percent of Total) | Weighted Sample Size (and Percent of Total) |
|---|---|---|
| ***Grade 4*** | | |
| **Nation** | 5,507 (100.0%) | 3,530,816 (100.0%) |
| **Region** | | |
| Northeast | 1,362 ( 24.7%) | 767,700 ( 21.7%) |
| Southeast | 1,445 ( 26.2%) | 813,351 ( 23.0%) |
| Central | 1,216 ( 22.1%) | 899,746 ( 25.5%) |
| West | 1,484 ( 26.9%) | 1,050,018 ( 29.7%) |
| ***Grade 8*** | | |
| **Nation** | 6,878 (100.0%) | 3,447,145 (100.0%) |
| **Region** | | |
| Northeast | 1,289 ( 18.7%) | 694,286 ( 20.1%) |
| Southeast | 2,075 ( 30.2%) | 865,529 ( 25.1%) |
| Central | 1,444 ( 21.0%) | 830,366 ( 24.1%) |
| West | 2,070 ( 30.1%) | 1,056,963 ( 30.7%) |
| ***Grade 12*** | | |
| **Nation** | 6,234 (100.0%) | 2,542,314 (100.0%) |
| **Region** | | |
| Northeast | 1,407 ( 22.6%) | 543,540 ( 21.4%) |
| Southeast | 1,729 ( 27.7%) | 572,658 ( 22.5%) |
| Central | 1,275 ( 20.5%) | 700,601 ( 27.6%) |
| West | 1,823 ( 29.2%) | 725,515 ( 28.5%) |

Percentages may not total 100 percent due to rounding.
SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 Geography Assessment.

# APPENDIX B

## Sample NAEP 1994 Geography Questions

The following appendix presents a sample cognitive section for each of the three grades assessed in the NAEP 1994 geography assessment. The sections contain a mixture of multiple-choice and constructed-response questions. The questions comprising the sample sections represent broad coverage of the three content areas that define the NAEP geography assessment.

The three cognitive sections that were selected for inclusion in this report are intended to give the reader a sense of the geography assessment. Given the breadth and depth of the content covered, no sampling of questions can adequately represent all the skills and content areas measured in the full assessment. The *NAEP Geography Framework* better describes the characteristics of the assessment as whole.

For each of the multiple-choice questions contained in Appendix B, the correct response is indicated. Also, the percentage of students who correctly answered the question is provided. For each of the constructed-response questions, a summary of the scoring guide accompanies the question.

Accompanying the questions are tables that present two types of percentages: (1) the overall percentage of students within a grade who successfully answered the question, and (2) the percentages of students within each of the achievement level intervals — *Basic*, *Proficient*, and *Advanced* — who successfully answered the question. For the questions in the grade 4 and 12 blocks, the percentages for students within the *Advanced* achievement level interval are not presented, however, because of small sample sizes. The percentages of students below *Basic* who successfully answered the questions are not included in the tables. However, these students are included in the overall percentages.

Please note that the format and size of some questions has been revised from the original student booklets to facilitate presentation in this report.

# GRADE 4

The following block of 15 questions was administered at grade 4. Students were given 25 minutes to complete the block.

The format of the questions was revised slightly to facilitate presentation in this report. For the multiple-choice questions, the correct answer is indicated (►). For constructed-response questions, an abbreviated version of the scoring rubric is presented after the question.

The table following each question presents two types of percentages: (1) the overall percentage of fourth-graders who successfully answered the question, and (2) the percentages of students within each of the achievement level intervals — *Basic*, *Proficient*, and *Advanced* — who successfully answered the question. The percentages for students within the *Advanced* achievement level interval are not presented, however, because of small sample sizes.

**1. Tom is able to wear lightweight clothing all year round. He probably lives near the**

A Arctic Circle

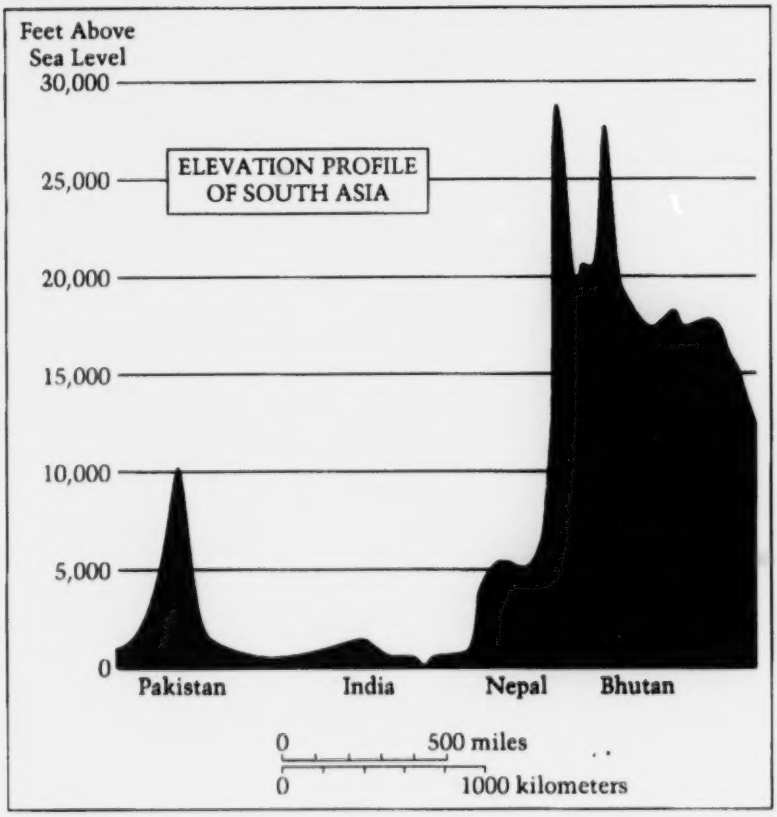
B British Isles

C South Pole

► D Equator

| *Grade 4* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **187-239*** | ***Proficient*** **240-275*** | ***Advanced*** **277 and above*** |
| **67 (1.3)** | **75 (1.8)** | **94 (1.9)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.




**2. Look at the elevation profile of South Asia. Which country has the lowest average elevation?**

A Pakistan

B India

C Nepal

D Bhutan

| *Grade 4* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **187-239*** | ***Proficient*** **240-275*** | ***Advanced*** **276 and above*** |
| **81 (1.2)** | **85 (1.5)** | **94 (2.3)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

3. **Many people migrate from one country to another. What is an important reason why many of these people want to leave their countries?**

_____
_____
_____
_____

**What is an important reason why people might choose to move to the United States?**

_____
_____
_____
_____

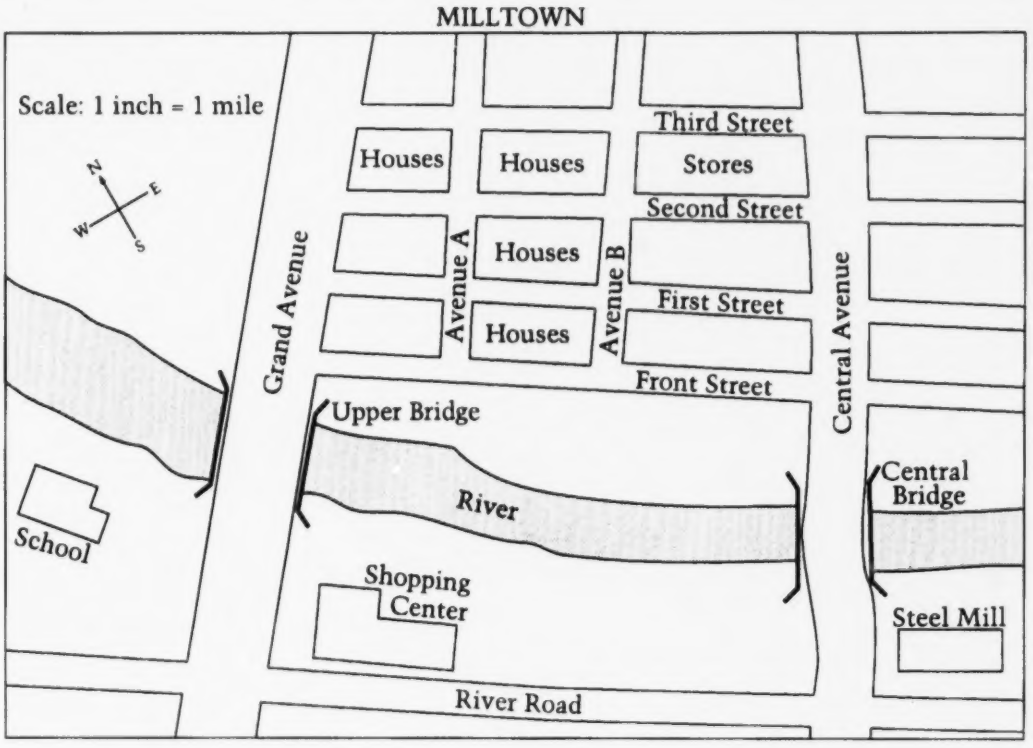
A **Complete** response correctly identifies a reason for migration and a reason for choosing to move to the United States.

A **Partial** response identifies either a reason for migration or a reason for choosing to move to the United States.

| *Grade 4* | Percentage "Complete" within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Complete** | ***Basic*** **187-239*** | ***Proficient*** **240-275*** | ***Advanced*** **276 and above*** |
| **14 (1.1)** | **13 (1.7)** | **29 (2.7)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**Questions 4-5 refer to the map of Milltown below.**




**4. If Central Bridge is closed for repairs, what will happen in Milltown?**

A Traffic will move faster.

B Upper Bridge will have more traffic.

C Central Avenue will have more traffic.

D The shopping center will close down.

| *Grade 4* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **187-239*** | ***Proficient*** **240-275*** | ***Advanced*** **276 and above*** |
| **57 (1.3)** | **58 (1.9)** | **86 (2.1)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

5. **If Central Bridge is closed for repairs, what will probably happen to the steel mill workers who live on Avenue B?**

A They will have to drive farther to work.

B They will lose their jobs because the mill will close.

C They will get to work faster.

D They will have to move south of the river.

| *Grade 4* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **187-239*** | ***Proficient*** **240-275*** | ***Advanced*** **276 and above*** |
| **63 (1.1)** | **67 (2.3)** | **89 (2.3)** | ** |

* NAEP geography composite scale range. ** Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**Questions 6-7 refer to the following chart.**

| MAJOR EXPORTS OF THREE COUNTRIES | | |
|---|---|---|
| Country A | Country B | Country C |
| Oil<br>Natural Gas<br>Coconuts | Cars<br>Televisions<br>Cameras | Computers<br>Airplanes<br>Wheat |

6. **The situation shown in the chart will probably lead to**

A trade among all three countries

B trade only between countries A and B

C trade only between countries B and C

D a decision by each country to produce all nine goods listed

| *Grade 4* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **187-239*** | ***Proficient*** **240-275*** | ***Advanced*** **276 and above*** |
| **37 (1.6)** | **35 (2.7)** | **62 (3.8)** | ** |

* NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**7. Is the United States most likely country A, B, or C?**

**Give one reason why.**

_____
_____
_____
_____

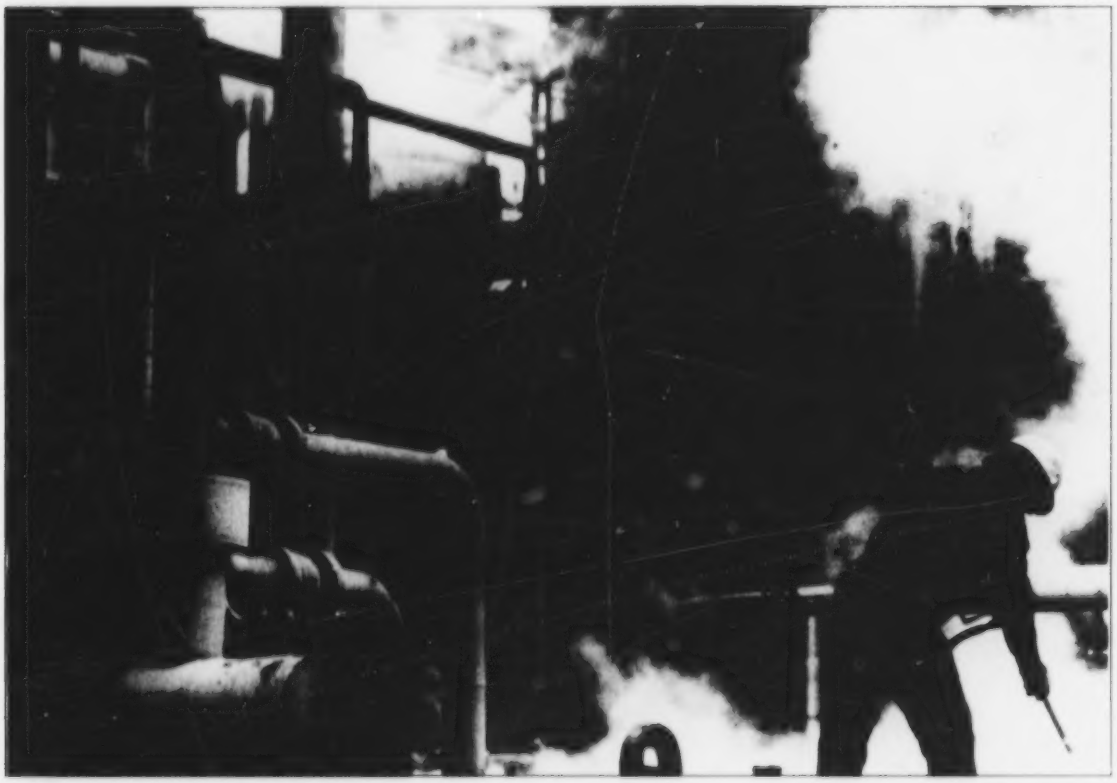
A **Complete** response correctly identifies country C and gives one appropriate reason why.

A **Partial** response correctly identifies C but gives either no reason why, or an inappropriate reason for the choice.

| *Grade 4* | Percentage "Complete" within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Complete** | ***Basic*** **187-239*** | ***Proficient*** **240-275*** | ***Advanced*** **276 and above*** |
| **9 (0.8)** | **6 (1.2)** | **23 (3.3)** | ** |

* NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**Questions 8-10 are based on the picture below.**



The Image Bank

8. **What type of land use does the picture show?**

   A Recreational

   B Farming

   C Industrial

   D Mining

| *Grade 4* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **187-239*** | ***Proficient*** **240-275*** | ***Advanced*** **276 and above*** |
| **52 (1.3)** | **54 (2.1)** | **71 (3.0)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**9. Explain how the activity shown in the picture might harm the people who live in the area.**

_____

_____

_____

_____

**Complete** a. Pollution must be obvious or strongly implied and tied to some specific health problem (i.e., damaged lungs, difficult to breathe, death)

**or** b. a specific health problem such as those listed above without linking it to pollution

**or** c. safety issue (e.g., explosive, flammable, evacuated)

| *Grade 4* | Percentage "Complete" within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Complete** | ***Basic*** **187-239*** | ***Proficient*** **240-275*** | ***Advanced*** **276 and above*** |
| **33 (1.6)** | **35 (2.6)** | **41 (4.0)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**10. Explain how the activity shown in the picture might help people who live in the area.**

_____

_____

_____

_____

A **Complete** response identifies one benefit of this activity.

| *Grade 4* | Percentage "Complete" within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Complete** | ***Basic*** **187-239*** | ***Proficient*** **240-275*** | ***Advanced*** **276 and above*** |
| **32 (1.4)** | **35 (2.1)** | **43 (4.1)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**WAYS TO GET RID OF WASTE**

- Dumping far out in the ocean
- Burning
- Recycling
- Burying in landfills

**11. From the list above, select one method of getting rid of waste and identify one advantage and one disadvantage of this method.**

Method of waste disposal: _____

_____

_____

Advantage: _____

_____

_____

Disadvantage: _____

_____

_____

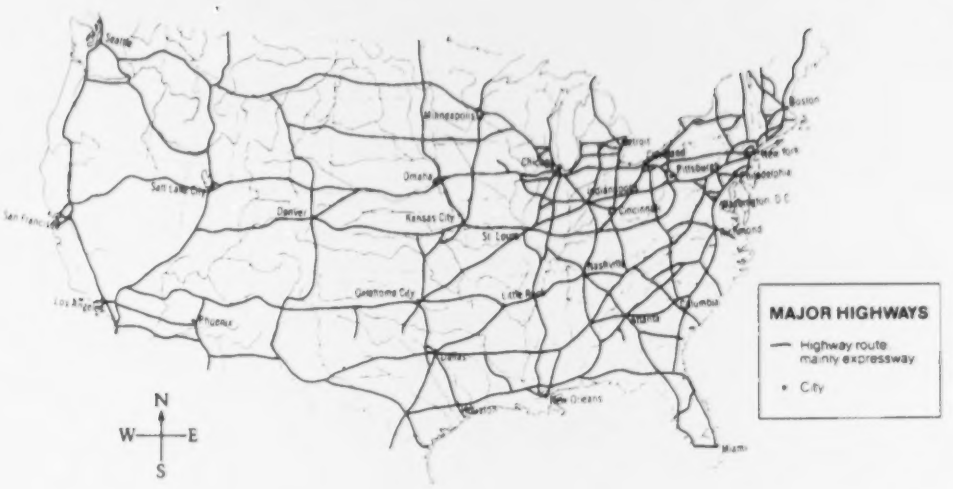
A **Complete** response accurately describes an advantage and disadvantage of one method of waste disposal. Explanations should be both specific to that method and geographically logical.

A **Partial** response describes either an advantage or a disadvantage. If present, the other description is incorrect or trivial, as in, "dumping waste in oceans has no effect on us," or "it takes a long time to dump waste in oceans".

| *Grade 4* | Percentage "Complete" within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Complete** | ***Basic*** **187-239*** | ***Proficient*** **240-275*** | ***Advanced*** **276 and above*** |
| **11 (0.9)** | **8 (1.3)** | **28 (3.2)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**Questions 12-13 are based on the highway map below.**




**12. The map shows that one part of the country has more major highways than the other part of the country. Why is this?**

A There are more people and cities in the eastern part of the country.

B It is easier to build highways in the eastern part of the country.

C Cars are not an important form of transportation in the western part of the country.

D States are larger in the western part of the country.

| *Grade 4* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **187-239*** | ***Proficient*** **240-275*** | ***Advanced*** **276 and above*** |
| **59 (1.5)** | **62 (1.9)** | **77 (3.0)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**13. To drive from Los Angeles to Salt Lake City in the most direct way, one would travel**

A southeast

B southwest

C northeast

D northwest

| *Grade 4* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **187-239*** | ***Proficient*** **240-275*** | ***Advanced*** **276 and above*** |
| **61 (1.3)** | **63 (2.0)** | **84 (2.7)** | ** |

* NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**14. Describe two important effects that a major oil spill in an ocean can have on the environment or on people's lives.**

_____

_____

_____

_____

A **Complete** response describes two effects of an oil spill in a distant place. Effects described may be environmental (for example, pollutes beaches, pollutes air, kills living organisms), economic (for example, ruins fishing industry, ruins tourist industry), or political (for example, causes disputes over who is responsible for cleanup).

A **Partial** response mentions that an oil spill affects the environment or the economy, or has some other effect, but does not explain how.

| *Grade 4* | Percentage "Complete" within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Complete** | ***Basic*** **187-239*** | ***Proficient*** **240-275*** | ***Advanced*** **276 and above*** |
| **13 (1.0)** | **12 (1.7)** | **28 (3.3)** | ** |

* NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**15. Many children all over the world know what rock-and-roll music is. What has made this possible?**

A Most children study foreign languages in school.

B Books about rock and roll are now available to all students.

C Most schools now teach students about different kinds of music.

D Communications systems like television and radio have helped the music spread.

| *Grade 4* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **187-239*** | ***Proficient*** **240-275*** | ***Advanced*** **276 and above*** |
| **70 (1.2)** | **77 (1.8)** | **92 (1.9)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

The following block of 16 questions was an overlap block administered at grades 8 and 12. Students were given 25 minutes to complete the block.

The format of the questions was revised slightly to facilitate presentation in this report. For the multiple-choice questions, the correct answer is indicated ( ). For constructed-response questions, an abbreviated version of the scoring rubric is presented after the question.

The tables following each question present two types of percentages: (1) the overall percentage of eighth-graders who successfully answered the question, and (2) the percentages of students within each of the achievement level intervals — *Basic*, *Proficient*, and *Advanced* — who successfully answered the question.

**1. Of the following, which group would most likely be located on level land?**

A Hydroelectric plant, national park, reservoir

B Orchard, coffee plantation, mine

C Amusement park, ski resort, quarry

D Railroad, city, airport

| *Grade 8* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **242-281*** | ***Proficient*** **282-314*** | ***Advanced*** **315 and above*** |
| **75 (0.9)** | **77 (2.0)** | **91 (1.5)** | **92 (4.0)** |

* NAEP geography composite scale range.
The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

Steve Dunwell/The Image Bank

**2. The land shown in the photograph has been altered mainly to**

A increase the beauty of the landscape

B increase the availability of land that can be used for farming

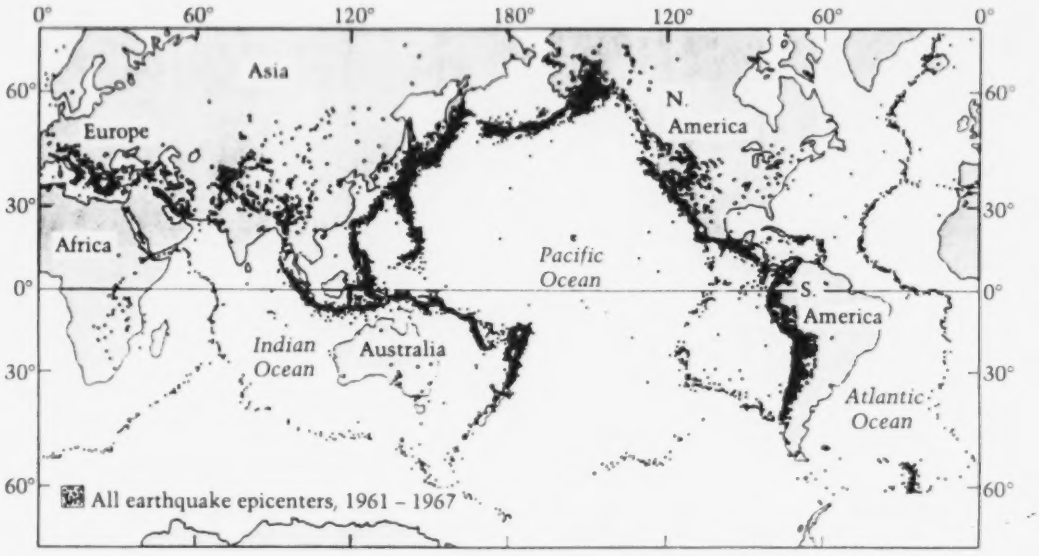
C demarcate land belonging to different people

D enable residents to climb the slopes more easily

| *Grade 8* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **242-281*** | ***Proficient*** **282-314*** | ***Advanced*** **315 and above*** |
| **60 (1.5)** | **57 (2.7)** | **75 (2.8)** | **92 (3.7)** |

* NAEP geography composite scale range.
The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**Questions 3-4** are based on the map below showing the distribution of earthquake epicenters around the world between 1961 and 1967.




3. **Between 1961 and 1967, the area that had the most earthquakes was the**

   A Mediterranean basin

   B mid-Atlantic Ocean

   C Caribbean Sea

   D Pacific Ocean rim

| *Grade 8* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **242-281*** | ***Proficient*** **282-314*** | ***Advanced*** **315 and above*** |
| **84 (0.7)** | **90 (1.8)** | **96 (1.6)** | **98 (1.5)** |

* NAEP geography composite scale range.
The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.



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4. **What is responsible for the pattern of earthquake activity shown on the map?**

   A Volcanic eruptions

   B The weight of ocean water pressing on the land

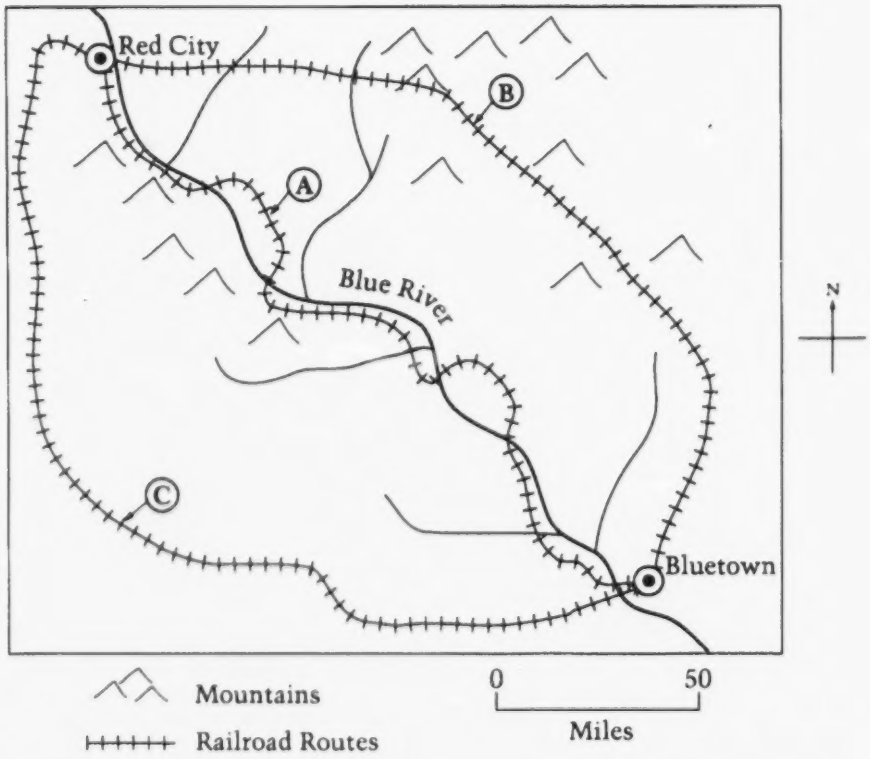
   C Hurricanes and cyclones

   D The movement of tectonic plates

| *Grade 8* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **242-281*** | ***Proficient*** **282-314*** | ***Advanced*** **315 and above*** |
| **69 (1.4)** | **74 (2.7)** | **92 (1.4)** | **99 (3.5)** |

* NAEP geography composite scale range.
The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**Question 5 is based on the map below.**



5. **Look at the map on the preceding page, which shows three possible routes for a railroad line that will be built to connect Red City with Bluetown.**

**Which route would be the least expensive to construct?**

_____

**Give two reasons why the route you chose would be the least expensive.**

1 _____

2 _____

A **Complete** response indicates that C is the least expensive route to construct. It gives two reasons why that may relate to A and B.

A **Partial** response indicates that C is the least expensive route to construct and gives one reason.

| *Grade 8* | Percentage "Complete" within Achievement Level Intervals | | |
|---|---|---|---|
| Overall Percentage Complete | *Basic* 242-281* | *Proficient* 282-314* | *Advanced* 315 and above* |
| 36 (1.5) | 36 (2.3) | 62 (3.3) | 80 (7.9) |

* NAEP geography composite scale range.
The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

6. **People from many different countries live in New York City. Children speaking many different languages attend its public schools. This is mainly because New York City**

   A has an efficient transportation system

   B has a higher wage rate than other United States cities

   ▶C is a port of entry for people from other parts of the world

   D is the site of the United Nations headquarters

| *Grade 8* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| Overall Percentage Correct | *Basic* 242-281* | *Proficient* 282-314* | *Advanced* 315 and above* |
| 70 (1.4) | 74 (2.9) | 87 (3.2) | 99 (1.4) |

* NAEP geography composite scale range.
The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

7. **In the mid-nineteenth century, before railroads were constructed, people in the United States transported commercial materials, such as timber and coal, over long distances primarily by means of**

   ▶A rivers and canals

   B turnpikes and freeways

   C pack horses and mule trains

   D ox carts and Conestoga wagons

| *Grade 8* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| Overall Percentage Correct | *Basic* 242-281* | *Proficient* 282-314* | *Advanced* 315 and above* |
| 56 (1.8) | 58 (2.6) | 67 (3.5) | 75 (7.7) |

* NAEP geography composite scale range.
The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

8. **The major areas of wheat production in the world are the central United States and Canada, Ukraine, south central Australia, and the pampas of Argentina. What is the characteristic shared by these areas that explains their role in wheat production?**

A All have rainy, damp climates.

B All are near sea coasts.

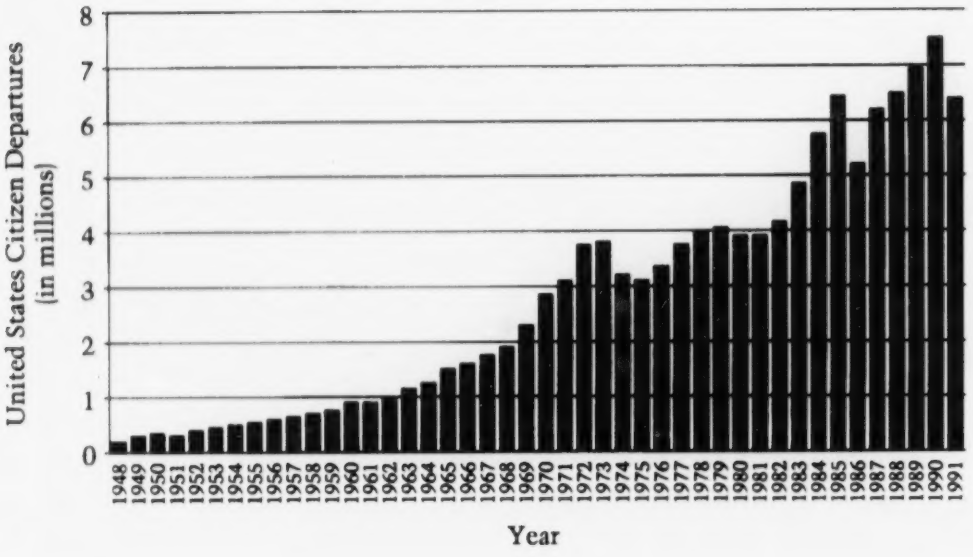
C All are plains.

D All are in highland regions.

| *Grade 8* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **242-281*** | ***Proficient*** **282-314*** | ***Advanced*** **315 and above*** |
| **52 (1.5)** | **48 (2.9)** | **81 (2.9)** | **95 (3.4)** |

* NAEP geography composite scale range.
The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

TRAVEL TO EUROPE, 1948-1991




**9. What is the dominant trend shown in the graph?**

_____

_____

_____

**Give two major reasons for the trend shown.**

_____

_____

_____

A **Complete** response identifies the major trend in the graph and provides two appropriate reasons to explain this.

A **Partial** response identifies the major trend in the graph but gives either no reason, or only one reason to explain this. Or, the response provides two appropriate reasons, but fails to identify the trend.

| *Grade 8* | Percentage "Complete" within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Complete** | ***Basic*** **242-281*** | ***Proficient*** **282-314*** | ***Advanced*** **315 and above*** |
| **9 (0.8)** | **3 (1.0)** | **22 (2.3)** | **49 (10.7)** |

* NAEP geography composite scale range.
The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**10. Fossil fuels such as oil and coal are formed from**

A geological processes that transform organic materials

B the rapid decay of animal bones

C organic processes that lead to the fossilization of animal tissue

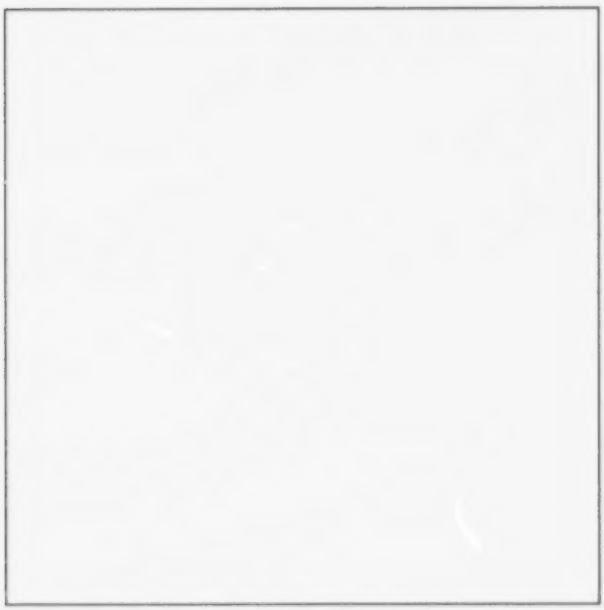
D artificial processes used to treat and reuse garbage

| *Grade 8* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **242-281*** | ***Proficient*** **282-314*** | ***Advanced*** **315 and above*** |
| **45 (1.3)** | **44 (2.4)** | **60 (3.2)** | **79 (7.8)** |

* NAEP geography composite scale range.
The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**11. After we anchored our ships in the ocean and went ashore to explore, we marched west. The forest was so thick we could only travel three miles in the first two days. Then we came to the mountains and climbed to the top. A rushing river flowed west out of the mountains. We continued to march two miles west and came down out of the mountains. Two miles further we came to the coast. It was obvious that the area we were exploring was an isthmus.**

**In the box below, draw a map of the region described above. Be sure to include all of the geographical elements mentioned in the description. Include a scale to indicate distances.**




A **Complete** response includes an accurate map in which at least four elements are correctly placed. The response must be an isthmus and have direction of travel and river correctly indicated.

An **Essential** response includes a map in which three elements are correctly placed. The response may be a peninsula or an island.

A **Partial** response includes a map in which at least two elements are correctly placed.

| *Grade 8* | Percentage "Essential" or Better within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Essential or Better** | ***Basic*** **242-281*** | ***Proficient*** **282-314*** | ***Advanced*** **315 and above*** |
| **41 (1.3)** | **39 (2.4)** | **78 (3.4)** | **92 (4.8)** |

* NAEP geography composite scale range.
The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**12. An example of diffusion is that crops that were once grown mostly in North and South America are**

A now grown all over the world

B now grown only in areas where productivity is high

C now grown only in the Northern Hemisphere

D no longer grown there

| *Grade 8* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **242-281*** | ***Proficient*** **282-314*** | ***Advanced*** **315 and above*** |
| **51 (1.3)** | **51 (2.3)** | **55 (2.6)** | **69 (9.0)** |

* NAEP geography composite scale range.
The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

Bas/Rothco

**13. Environmental issues are viewed differently by people in different circumstances. Explain how the artist makes this point in the cartoon.**

A **Complete** response discusses environmental issue, tension (implied or stated between the 2 worlds), hypocrisy (not absolutely necessary if tension is clearly discussed), and two different viewpoints (developed vs developing). The discussion must be at the national level.

An **Essential** response mentions two different views (developed vs developing) and refers to trees and car pollution. An appreciation of tension may or may not be present. Or, the response implies or states the hypocrisy that exists and talks about the tree or the car.

A **Partial** response mentions that the cartoon discusses environmental issues or gives one viewpoint.

| *Grade 8* | Percentage "Essential" or Better within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Essential or Better** | ***Basic*** **242-281*** | ***Proficient*** **282-314*** | ***Advanced*** **315 and above*** |
| **24 (1.2)** | **21 (2.3)** | **46 (3.6)** | **71 (9.1)** |

* NAEP geography composite scale range.
The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**14. In the United States, most of the fertile soils of the Midwest were derived from**

A glaciers

B volcanic activity

C decaying organic matter

D eroded sandstone

| *Grade 8* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **242-281*** | ***Proficient*** **282-314*** | ***Advanced*** **315 and above*** |
| **21 (1.2)** | **19 (2.4)** | **25 (3.3)** | **47 (11.2)** |

* NAEP geography composite scale range.
The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**15. Under which of the following circumstances would you be most likely to find snow in equatorial regions?**

A In areas below sea level

B In areas at high latitudes

C In areas at high elevations

D In winter

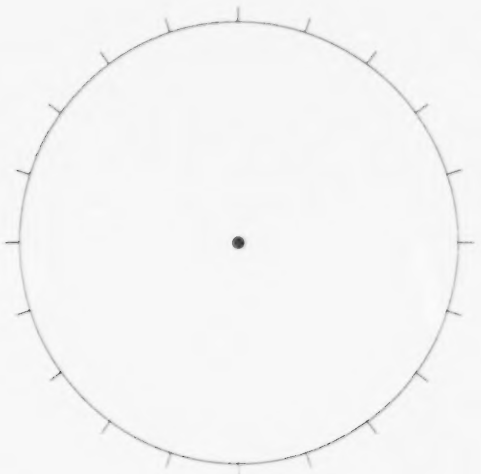
| *Grade 8* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **242-281*** | ***Proficient*** **282-314*** | ***Advanced*** **315 and above*** |
| **51 (1.3)** | **52 (2.1)** | **75 (2.6)** | **89 (4.9)** |

* NAEP geography composite scale range.
The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**AVERAGE ANNUAL PRECIPITATION FOR LAKESIDE**

| Season | Average Inches | Percent of Total |
|---|---|---|
| Spring | 5.0 | 25 |
| Summer | 7.0 | 35 |
| Fall | 4.0 | 20 |
| Winter | 4.0 | 20 |
| Total | 20.0 | 100 |

**16. Use the information in the table above to construct a pie chart on the figure below. Be sure to label all information. You may use your ruler to draw the chart.**



A **Complete** response correctly charts the percentage of rainfall of the four seasons on the circle and correctly labels the segments (the minimum correct labels are the four seasons).

A **Partial** response correctly charts the percentage of rainfall of one to three seasons or divides the chart up correctly but does not label by season or labels by inches only.

| *Grade 8* | Percentage "Complete" within Achievement Level Intervals | | |
|---|---|---|---|
| Overall Percentage Complete | *Basic* 242-281* | *Proficient* 282-314* | *Advanced* 315 and above* |
| 45 (1.5) | 42 (2.7) | 72 (3.3) | 87 (7.3) |

* NAEP geography composite scale range.
The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

# GRADE 12

The following block of 17 questions was administered at grade 12. Students were given 25 minutes to complete the block.

The format of the questions was revised slightly to facilitate presentation in this report. For the multiple-choice questions, the correct answer is indicated (►). For constructed-response questions, an abbreviated version of the scoring rubric is presented after the question.

The tables following each question present two types of percentages: (1) the overall percentage of twelfth-graders who successfully answered the question, and (2) tthe percentages of students within each of the achievement level intervals — *Basic*, *Proficient*, and *Advanced* — who successfully answered the question.. For many of the questions, the percentages for students within the *Advanced* achievement level interval are not presented, however, because of small sample sizes.

**1. Which of the following is most likely to be found in the central business district of a city?**

A Automobile dealerships

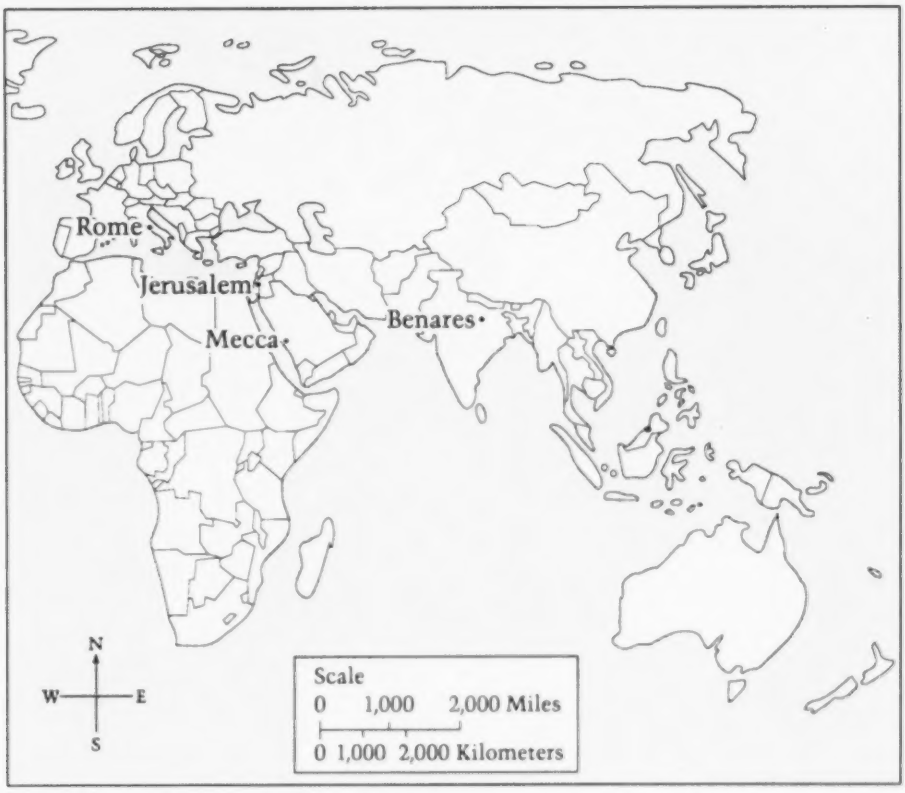
B A steel mill

C An office tower

D Single-family homes

| *Grade 12* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **270-304*** | ***Proficient*** **305-338*** | ***Advanced*** **339 and above*** |
| **78 (1.1)** | **82 (1.8)** | **93 (2.6)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.




**2. The four locations indicated on the map above are**

A capitals of highly industrialized nations

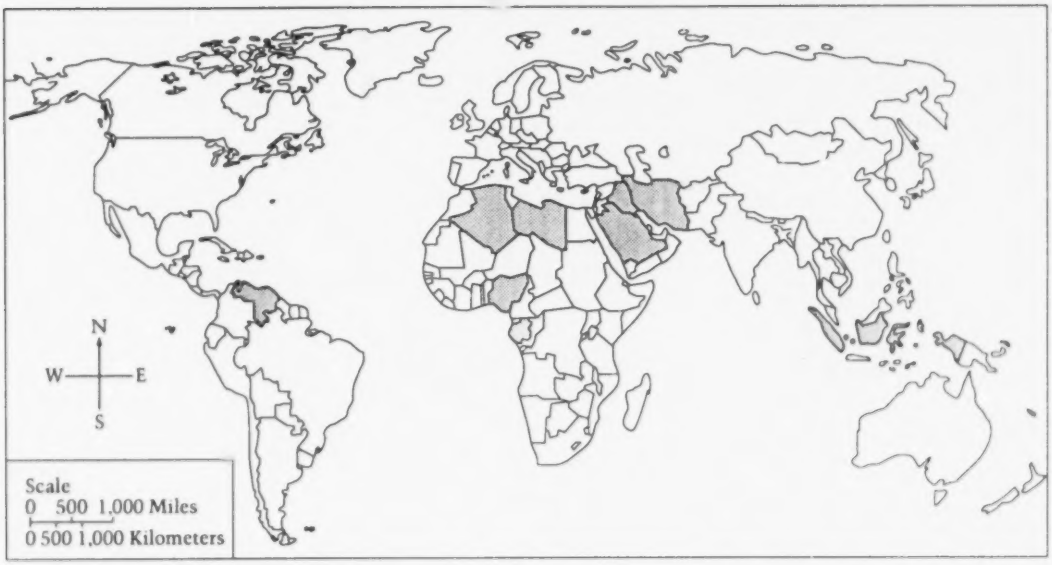
B the world's four most densely populated cities

C areas of highest elevation

D religious centers

| *Grade 12* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **270-304*** | ***Proficient*** **305-338*** | ***Advanced*** **339 and above*** |
| **76 (1.2)** | **79 (2.1)** | **96 (1.5)** | ** |

* NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.




**3. On the map above, the shaded countries represent the membership of the**

A Organization of Petroleum Exporting Countries (OPEC)

B World Health Organization (WHO)

C North Atlantic Treaty Organization (NATO)

D British Commonwealth of Nations

| *Grade 12* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **270-304*** | ***Proficient*** **305-338*** | ***Advanced*** **339 and above*** |
| **65 (1.4)** | **66 (2.2)** | **84 (2.1)** | ** |

* NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**Mexico City is an example of runaway urban growth. Every day an estimated average of 1,700 people move there from villages in the countryside. In addition, more than 1,000 babies are born in the city daily. Some geographers think that as many as 50 million people will live there by the year 2000. Thousands of families survive on the equivalent of a few dollars a day, and most members of these families have no prospects for steady jobs or much improvement in the physical quality of their lives. However, regardless of the hardship and the poverty, people continue to pour into Mexico City.**

4. **Give two reasons why people continue to move to Mexico City despite the difficult living conditions.**

_____

_____

_____

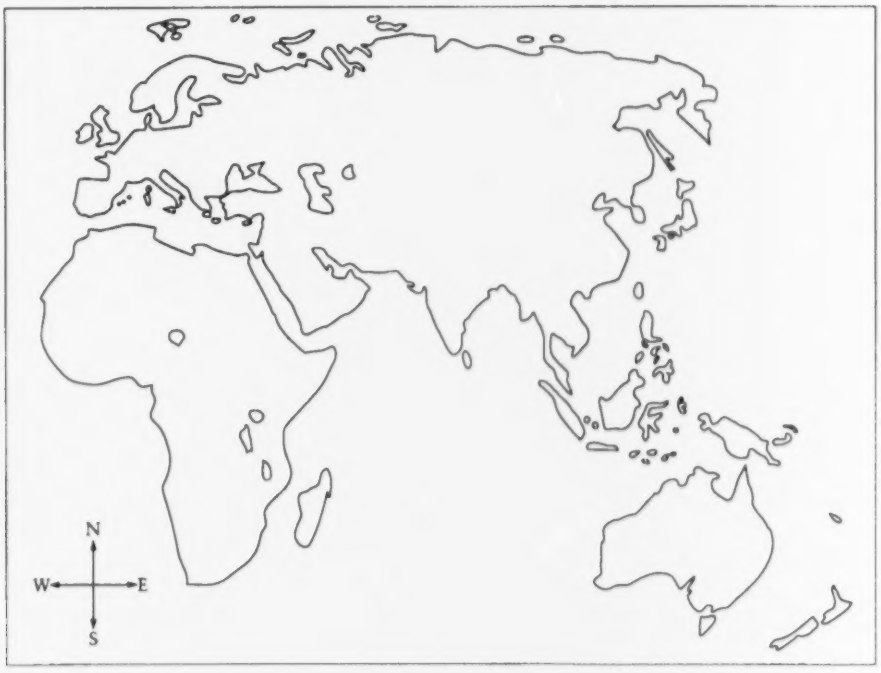
A **Complete** response gives two reasons why people continue to move to Mexico City. The idea must be conveyed that more opportunities not guarantees are available.

A **Partial** response gives one reason that explains why people continue to move to Mexico City.

| *Grade 12* | Percentage "Complete" within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Complete** | ***Basic*** **270-304*** | ***Proficient*** **305-338*** | ***Advanced*** **339 and above*** |
| **16 (0.9)** | **12 (1.4)** | **34 (3.2)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**For Question 5, write your answer on the map below.**




5. **Write the number of each of the following physical features in the correct location on the map.**

   1 Pyrenees Mountains

   2 The Japanese Archipelago

   3 Mediterranean Sea

   4 Persian Gulf

A **Complete** response correctly labels all four features on the map.

An **Essential** response correctly labels three features on the map.

A **Partial** response correctly labels one to two features on the map.

| *Grade 12* | Percentage "Essential" or Better within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Essential or Better** | ***Basic*** **270-304*** | ***Proficient*** **305-338*** | ***Advanced*** **339 and above*** |
| **23 (1.4)** | **18 (2.0)** | **50 (3.7)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**A dense canopy of interlaced broad-leafed trees blocks the sun and shades the forest floor all year in this sparsely populated area. Shallow-rooted trees that rise 150 feet or more have broad trunks with support roots above ground. Rain occurs every day and the forest floor is always damp and dark.**

6. **What would the vegetation in this region be called? Name a country where this region might be located.**

_____

_____

_____

A **Complete** response identifies the vegetation as tropical rain forest, and gives a possible location.

A **Partial** response correctly identifies either the vegetation (rainforest) or a location, but not both.

| *Grade 12* | Percentage "Complete" within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Complete** | ***Basic*** **270-304*** | ***Proficient*** **305-338*** | ***Advanced*** **339 and above*** |
| **36 (1.6)** | **34 (2.2)** | **66 (3.6)** | ** |

* NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**Questions 7-8 are based on the following tables.**

**POPULATION OF STATE X**

| Year | Total Population | Urban | Rural |
|---|---|---|---|
| 1850 | 92,600 | 7% | 93% |
| 1860 | 378,000 | 21% | 79% |
| 1870 | 560,200 | 37% | 63% |
| 1880 | 864,700 | 42% | 58% |
| 1890 | 1,213,400 | 49% | 51% |
| 1900 | 1,485,100 | 52% | 48% |
| 1910 | 2,377,500 | 62% | 38% |
| 1920 | 3,426,900 | 68% | 32% |
| 1930 | 5,677,300 | 73% | 27% |
| 1940 | 6,907,400 | 71% | 29% |
| 1950 | 10,586,200 | 81% | 19% |
| 1960 | 15,717,200 | 86% | 14% |
| 1970 | 19,953,100 | 91% | 9% |
| 1980 | 23,668,600 | 91% | 9% |

**PEOPLE WHO MOVED TO STATE X**

| Years | Number of People Moving into State |
|---|---|
| 1870 - 1880 | 129,600 |
| 1880 - 1890 | 214,200 |
| 1890 - 1900 | 172,700 |
| 1900 - 1910 | 694,100 |
| 1910 - 1920 | 804,100 |
| 1920 - 1930 | 1,695,200 |
| 1930 - 1940 | 974,600 |
| 1940 - 1950 | 2,399,100 |
| 1950 - 1960 | 2,788,000 |
| 1960 - 1970 | 1,528,000 |
| 1970 - 1980 | 1,462,000 |



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7. **During which ten-year period did the percentage of people living in urban areas increase the most?**

   A 1860-1870

   B 1890-1900

   C 1930-1940

   D 1960-1970

| *Grade 12* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **270-304*** | ***Proficient*** **305-338*** | ***Advanced*** **339 and above*** |
| **65 (1.3)** | **67 (2.0)** | **86 (2.5)** | ** |

* NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

8. **Which ten-year period showed both a decrease in the number of people moving into State X and an increase in the percentage of people living in rural areas?**

   A 1890-1900

   B 1930-1940

   C 1960-1970

   D 1970-1980

| *Grade 12* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **270-304*** | ***Proficient*** **305-338*** | ***Advanced*** **339 and above*** |
| **60 (1.5)** | **60 (3.0)** | **82 (3.1)** | ** |

* NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

9. **Maddieville is building a new shopping center. There is a disagreement in the city council over whether to build the shopping center at site A or at site B on the map.**

   **As a resident of the city who would like to shop at the new shopping center, write a letter to the mayor in support of either site A or site B. Give three reasons why the site you support is better than the other site.**

A **Complete** response chooses a site and gives three reasons for the choice.

An **Essential** response chooses a site and supports the choice with two reasons.

A **Partial** response chooses a site and supports the choice with one reason.

| *Grade 12* | Percentage "Essential" or Better within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Essential or Better** | ***Basic*** **270-304*** | ***Proficient*** **305-338*** | ***Advanced*** **339 and above*** |
| **55 (1.5)** | **57 (2.7)** | **76 (2.8)** | ** |

* NAEP geography composite scale range. ** Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**10. Which of the following methods provides the most accurate and effective visual evidence for determining the extent of desertification in a region?**

A Contour maps

B Long-range weather forecasts

C Satellite imagery

D Seismic readings

| *Grade 12* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **270-304*** | ***Proficient*** **305-338*** | ***Advanced*** **339 and above*** |
| **38 (1.3)** | **39 (2.4)** | **47 (3.0)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**11. Which of the following countries has the largest volume and value of trade with the United States?**

A Japan

B Great Britain

C Canada

D Germany

| *Grade 12* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **270-304*** | ***Proficient*** **305-338*** | ***Advanced*** **339 and above*** |
| **10 (1.0)** | **9 (1.6)** | **9 (2.3)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**12. Many people in the Caribbean region are of West African descent. Which of the following is the best explanation for this?**

A Rapid urbanization

B The use of slaves in plantation agriculture

C Religious persecution in the countries of origin

D Economic opportunity in the Caribbean region

| *Grade 12* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **270-304*** | ***Proficient*** **305-338*** | ***Advanced*** **339 and above*** |
| **47 (1.4)** | **42 (2.4)** | **78 (3.6)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**13. Which of the following has most affected the development of suburbs in the United States in the last 50 years?**

A Automobiles

B Computers

C Electricity

D High-speed rail transportation

| *Grade 12* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **270-304*** | ***Proficient*** **305-338*** | ***Advanced*** **339 and above*** |
| **53 (1.8)** | **49 (2.3)** | **71 (3.4)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**Questions 14-16 refer to the table below.**

STATISTICAL COMPARISON OF TWO COUNTRIES

| | Country A | | Country B | |
|---|---|---|---|---|
| Total Population | | 7,193,000 | | 123,120,000 |
| Urban-Rural | | | | |
| Urban | | 49.0% | | 76.7% |
| Rural | | 51.0% | | 23.3% |
| Religious | | | | |
| | Roman Catholic | 92.5% | Shinto* | 89.5% |
| | Baha'i | 2.6% | Buddhist* | 76.4% |
| | Other | 4.9% | Christian | 1.2% |
| | | | Other | 9.3% |
| Life Expectancy at Birth (years) | | | | |
| Male | | 50.9 | | 75.9 |
| Female | | 55.4 | | 82.1 |
| Age Distribution | | | | |
| Under 15 | | 43.4% | | 19.0% |
| 15-29 | | 26.4% | | 21.6% |
| 30-44 | | 15.7% | | 22.4% |
| 45-59 | | 9.3% | | 20.1% |
| 60-74 | | 4.4% | | 9.2% |
| Over 74 | | 0.8% | | 7.7% |
| Percent of Population over 25 with No Formal Schooling | | 48.6% | | 0.3% |
| Leading Exports (as percent of total exports): | Natural Gas | 21.0% | Motor Vehicles | 18.4% |
| | Tin | 12.0% | Machinery | 10.9% |
| | Zinc | 5.7% | Iron and Steel | 5.8% |
| | Silver | 5.6% | Chemicals | 5.3% |
| | Antimony | 4.0% | Textiles | 2.6% |
| | Coffee | 2.0% | Vessels | 1.5% |
| | Sugar | 1.5% | Radios | 0.8% |
| | Hides | 1.4% | Televisions | 0.7% |
| | | | *Some persons practice both religions | |

**14. Which of the following statements most accurately describes Country A?**

A It is dependent on raw material exports.

B It probably has a high literacy rate.

C It has a predominantly urban population.

D It will experience slow population growth.

| *Grade 12* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **270-304*** | ***Proficient*** **305-338*** | ***Advanced*** **339 and above*** |
| **53 (1.4)** | **52 (2.2)** | **78 (2.4)** | ** |

* NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**15. Which of the following statements most accurately describes Country B?**

A It has few medical facilities.

B It is industrialized.

C Its primary imports are manufactured goods.

D Its population is primarily employed in agriculture.

| *Grade 12* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **270-304*** | ***Proficient*** **305-338*** | ***Advanced*** **339 and above*** |
| **67 (1.4)** | **68 (2.3)** | **88 (2.4)** | ** |

* NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

**16. Country B is most likely**

A Botswana

B India

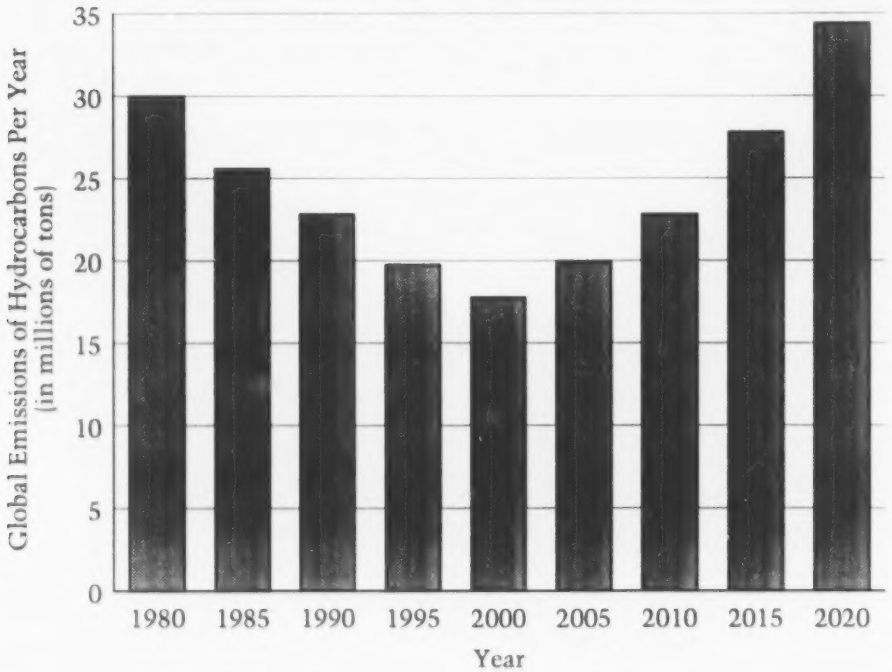
C Ireland

D Japan

| *Grade 12* | Percentage Correct within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Correct** | ***Basic*** **270-304*** | ***Proficient*** **305-338*** | ***Advanced*** **339 and above*** |
| **61 (1.4)** | **61 (2.3)** | **80 (2.5)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

ESTIMATED LEVELS OF HYDROCARBONS
IN THE GLOBAL ATMOSPHERE FROM 1980–2020




**17. The graph shows a prediction made in 1970 of levels of hydrocarbons in the atmosphere. Describe the pattern indicated by the graph.**

_____
_____
_____

**Explain two factors that could account for the pattern shown.**

_____
_____
_____

A **Complete** response identifies the pattern and explains two factors, one linked to a decrease in hydrocarbon emissions and one to an increase in hydrocarbon emissions.

An **Essential** response identifies the pattern and explains one factor that is linked to either a decrease or an increase in hydrocarbon emissions.

A **Partial** response identifies the pattern or explains one factor that is linked to a decrease or an increase in hydrocarbon emissions or explains one or two factors that are not linked.

| *Grade 12* | Percentage "Essential" or Better within Achievement Level Intervals | | |
|---|---|---|---|
| **Overall Percentage Essential or Better** | ***Basic*** **270-304*** | ***Proficient*** **305-338*** | ***Advanced*** **339 and above*** |
| **9 (1.0)** | **7 (1.5)** | **19 (2.3)** | ** |

*NAEP geography composite scale range. **Sample size insufficient to permit reliable estimate. The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample.

# APPENDIX C

## Reporting Subgroup(s) Definitions

Findings from the NAEP 1994 geography assessment are presented for groups of students that are defined by shared characteristics. Data are reported for subpopulations only where sufficient numbers of students and adequate school representation are present. However, data for all students, regardless of whether their subgroup was reported separately, were included in computing overall national and regional results.

The reporting subgroups presented in this report include: race/ethnicity, gender, parents' education level, public/nonpublic school, and region. Definitions of these subgroups are provided below.

*Race/Ethnicity*. Results are presented for students of different racial/ethnic groups based on the students' self-identification of their race/ethnicity according to the following mutually exclusive categories: White, Black, Hispanic, Asian, Pacific Islander, and American Indian (including Alaskan Native).

*Gender*. Results are reported separately for males and females.

*Parents' Education Level*. Results are presented by the student's report of the extent of schooling for each of their parents — did not finish high school, graduated from high school, some education after high school, graduated from college, or did not know. The response indicating the higher level of education was selected for reporting. Note that a substantial percentage of fourth-grade students did not know their parents' education level.

*Public/Nonpublic School*. Results are reported by the type of school that the student attends — public or nonpublic school. Nonpublic schools include Catholic and other nonpublic schools. Bureau of Indian Affairs (BIA) schools and domestic Department of Defense (DoD) schools were not classified in either the public or nonpublic categories. Results for the BIA and DoD schools are included, however, in the overall national results.

*Region*. Results are reported for four regions of the nation: Northeast, Southeast, Central and West. States included in each region are shown in the following figure. All 50 states and the District of Columbia are listed.

| NORTHEAST | SOUTHEAST | CENTRAL | WEST |
|---|---|---|---|
| Connecticut | Alabama | Illinois | Alaska |
| Delaware | Arkansas | Indiana | Arizona |
| District of Columbia | Florida | Iowa | California |
| Maine | Georgia | Kansas | Colorado |
| Maryland | Kentucky | Michigan | Hawaii |
| Massachusetts | Louisiana | Minnesota | Idaho |
| New Hampshire | Mississippi | Missouri | Montana |
| New Jersey | North Carolina | Nebraska | Nevada |
| New York | South Carolina | North Dakota | New Mexico |
| Pennsylvania | Tennessee | Ohio | Oklahoma |
| Rhode Island | Virginia* | South Dakota | Oregon |
| Vermont | West Virginia | Wisconsin | Texas |
| Virginia* | | | Utah |
| | | | Washington |
| | | | Wyoming |

* Note that the part of Virginia that is included in the Washington, D.C. metropolitan area is included in the Northeast region; the remainder of the state is included in the Southeast region.

NAEP'S 1994 geography assessment was a collaborative effort among staff from the National Center for Education Statistics (NCES), the National Assessment Governing Board (NAGB), Educational Testing Service (ETS), Westat, and National Computer Systems (NCS). The program benefited from the contributions of hundreds of individuals at the state and local levels — Governors, Chief State School Officers, State and District Test Directors, State Coordinators, and district administrators — who tirelessly provided their wisdom, experience, and hard work. Most importantly, NAEP is grateful to students and school staff who made the assessment possible.

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The NAEP project at ETS is directed by Paul Williams and resides in the Center for the Assessment of Educational Progress (CAEP) managed by Archie Lapointe and Paul Williams. Steve Lazer managed test development activities, and Alexandra Beatty and Hilary Persky worked with the geography Item Development committee to develop the assessment instruments. Christine O'Sullivan coordinated the geography scoring efforts and contributed to the reporting of results. Jules Goodison managed the operational aspects together with John Olson, and sampling and data collection activities were carried out by Westat under the direction of Rene Slobasky, Nancy Caldwell, and Keith Rust. Printing, distribution, scoring, and processing activities were conducted by NCS, under the supervision of Judy Moyer, Brad Thayer, Mathilde Kennel, Linda Reynolds, and Barbara Price.

Statistical and psychometric activities for the assessments were led by Frank Jenkins under the direction of Eugene Johnson, John Mazzeo, and Jim Carlson. Ed Kulick, assisted by Yim Fai Fong and Steve Wang, performed the geography analyses. Karen Miller and John Mazzeo contributed substantially to report design activities. Mary Michaels directed the report production aspects, with coordination assistance from Sharon Davis-Johnson. Loretta Casalaina, Diane Guthrie, Joe Kolodey, Carol Errickson, and Sheri Barnes provided further report design and composition assistance. Beverly Cisney and Alice Kass provided the excellent desktop publishing skills essential to the project. Many thanks are provided to the numerous reviewers, internal to ETS and NCES as well as external. The comments and critical feedback provided by the following reviewers are reflected in the final version of this report: Robert Boruch, Mary Lyn Bourque, Roger Downs, Robert Dulli, Larry Feinberg, Sally Kilgore, Lanny Proffer, and Barbara Winston.

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